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THE BRITISH SERVICES

97/9



# GIMMIGELA

## EXPEDITION 1997

# REPORT



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# TABLE OF CONTENTS

CHAPTER 1 GENERAL REPORT .....	1-1
INTRODUCTION .....	1-1
AIM .....	1-1
OBJECTIVES .....	1-1
EXPEDITION PLANNING IN THE UK .....	1-1
THE GIMMIGELA TEAM .....	1-2
NEPALESE PERMANENT STAFF .....	1-3
THE LAUNCH .....	1-4
SPONSORSHIP .....	1-4
PLANNING HIGHLIGHTS .....	1-4
PREPARATIONS IN KATHMANDU .....	1-5
ACCOMMODATION IN KATHMANDU .....	1-5
APPROACH MARCH .....	1-6
BASE CAMP (BC) .....	1-6
THE CLIMB .....	1-7
THE MARCH OUT .....	1-7
WEATHER FORECASTING .....	1-7
PUBLIC RELATIONS .....	1-7
PHOTOGRAPHY / PRESENTATIONS .....	1-7
ANNEX A - DIAGRAM OF APPROACH MARCH ROUTE .....	1-8
ANNEX B - GIMMIGELA DIARY .....	1-9
CHAPTER 2 CLIMBING REPORT .....	2-1
THE PLAN .....	2-1
BC - ADVANCED BASE CAMP (ABC) .....	2-2
ABC - CAMP2 (C2) .....	2-2
C2 -C3 .....	2-3
C3-C4 - THE FIRST SUMMIT BID .....	2-4
THE SUMMIT .....	2-5
THE VIEW FROM BASE CAMP .....	2-5
LOCATION MAP .....	2-6
CHAPTER 3 EQUIPMENT REPORT .....	3-1
GENERAL .....	3-1
MILITARY PROCUREMENT .....	3-1
CIVILIAN PROCUREMENT .....	3-2
EQUIPMENT TESTING .....	3-2
PACKING AND TRANSIT TO NEPAL .....	3-2
EQUIPMENT MANAGEMENT IN KATHMANDU .....	3-2



EQUIPMENT TRANSPORTATION .....	3-2
ANNEX A - EQUIPMENT LISTS .....	3-3
ANNEX B - EQUIPMENT REPORTS .....	3-7
CHAPTER 4 FOOD REPORT .....	4-1
INTRODUCTION .....	4-1
PROCUREMENT .....	4-1
COMMENTS AND SUGGESTIONS .....	4-1
COOKING POLICY .....	4-3
RECOMMENDATIONS .....	4-3
SUMMARY .....	4-3
ANNEX A - HIGH ALTITUDE RATION (HAR) MENUS .....	4-4
ANNEX B - BASE CAMP RATIONS - ENHANCEMENTS TO 10-MAN RATION PACKS .....	4-5
ANNEX C - FOOD ACCOUNT .....	4-5
CHAPTER 5 COMMUNICATIONS REPORT .....	5-1
'TACTICAL' COMMUNICATIONS .....	5-1
REAR LINK COMMUNICATIONS .....	5-1
POWER SOURCES .....	5-1
COMMUNICATIONS IN NEPAL .....	5-1
ANNEX A - TECHNICAL DESCRIPTION OF EXPEDITION RADIOS AND SATCOM ....	5-2
CHAPTER 6 MEDICAL REPORT .....	6-1
PREPARATION IN THE UK .....	6-1
MEDICAL RESEARCH .....	6-1
PREPARATION IN NEPAL .....	6-1
APPROACH TREK .....	6-1
ALTITUDE RELATED PROBLEMS .....	6-2
CLIMBING PHASE .....	6-2
RECOMMENDATIONS AND CONCLUSIONS .....	6-3
ANNEX A - EXPEDITION MEDICAL STORES .....	6-4
ANNEX B - CONDITIONS TREATED ON EXPEDITION .....	6-5
CHAPTER 7 FINANCIAL REPORT .....	7-1
INCOME .....	7-1
COMMERCIAL SPONSORSHIP .....	7-1
EXPENDITURE .....	7-1
ANNEX A - EXPEDITION BALANCE SHEET .....	7-2

Patron: Admiral Sir Jock Slater GCB LVO ADC  
First Sea Lord and Chief of Naval Staff  
**THE BRITISH SERVICES GIMMIGELA EXPEDITION**  
A Royal Navy and Royal Marines Mountaineering Club Expedition  
Leader: Major PH Parsons Royal Marines

The outcome of any adventure is, by definition, uncertain. If that were not the case, there would be little point in doing it. Gimmigela was an adventure of a lifetime. The mountain kept us guessing right up to the end and even the day before the summit, after five gut-busting weeks, I felt sure we were staring defeat in the face. The weather was deteriorating and time running out. However, by the skin of our teeth we achieved our goal and without mishap. We returned just a few weeks ago and already, with the immediate demands and deadlines of work, a great adventure is becoming simply a memory.

The team is everything and we were blessed with a good one. For the most part, we were a happy and harmonious group and worked well together. Ted, Callum and Dave, the 3 non-Naval members, made it a joint venture and stopped the Bootnecks becoming too parochial - they may argue otherwise! Humour was in abundance and I recall few dull moments.

The mountain was all we expected of it. Although in the shadow of Kanchenjunga, Gimmigela has its own character. It is a beautiful mountain to look at and was no push over to climb. I think most of us would admit that we found it very hard, technically, physically and mentally - I know I did. Perhaps the greatest surprise was the quality of the climbing. Although loose in places, the climbing was continually steep, exposed and exciting and followed a compelling line. I remember Larry's remark that if the ridge was in the Chamonix range, it would be a classic. It was certainly no snow plod.

For my part, the idea of leading an expedition had been in the back of my mind for some time. Over the years, I have gained so much from the Club that the time seemed right to put something back in. I half-heartedly asked my appointer for the time off to do the trip and, to my great surprise, he said yes - I was not expecting that! My bluff was called and the game was on!

The expedition was an appropriate one for the RN & RMMC; it was our 50th anniversary and some time since the Club had organised a trip. It followed on from Phabrang and Manaslu North and, hopefully, will be a prelude to Kanchenjunga 2000. The Gimmigela spell was sadly broken however, when on our return home we learned the sad news of Malcolm Rutherford's untimely death. Malcolm, the Club's President for the last 11 years, was typically enthusiastic about the project and it was through him that we were lucky enough to secure the patronage of Admiral Sir Jock Slater, The First Sea Lord. Happily, Malcolm heard of our success on the mountain shortly before he died.

What follows is the official expedition record. It is aimed at the planners of future expeditions in the hope that British Service men and women may continue to benefit from those unique challenges and rewards that we gained on Gimmigela. Such rich experiences are becoming increasingly scarce in a busier world and I am of the firm belief that trips to the greater ranges benefit the Services far more than is immediately apparent.

Plymouth  
25 July 1997



PH Parsons  
Maj RM  
Expedition Leader





# CHAPTER 1 - GENERAL REPORT

## INTRODUCTION

1. The idea for an expedition to climb an exciting peak with real mountaineering appeal was first proposed in 1994, after the Royal Navy and Royal Marines Mountaineering Club (RNRMMC) AGM. The preference was for a peak high enough to challenge aspirant Himalayan mountaineers but less than 8000m. The emphasis was to be on the adventurous aspects of mountaineering and to develop future potential. A remote, preferably unclimbed mountain in an isolated area was sought to test the team in full. The 8000m peaks were intentionally avoided. They are extremely expensive to climb, often require oxygen and have received too much attention recently.

2. Gimmigela was selected as the expedition objective in December '94 - it was an unclimbed 7350m peak in the remote NE corner of Nepal. Before we could get to grips with it, however, it received 2 ascents, both by the Japanese. Nevertheless, it was still remote and relatively little was known about it, so it was still a worthy objective.

3. The RNRMMC was to organise and lead the expedition with places available to the AMA and RAFMA. The team would be selected from a mixture of experienced Himalayan or alpine climbers (the 'old crinklies') and younger climbers aspiring to the greater ranges but with proven technical ability (the 'young bucks'). It was, therefore, exclusively mountaineering in scope.

## AIM

4. The aim of the expedition was to make the first British ascent of Gimmigela. This was achieved in full and additionally, the route was a new one, having never been attempted before.

## OBJECTIVES

5. The stated objectives of the expedition were as follows:

- a. To foster and develop character and leadership qualities amongst service personnel in a demanding environment.
- b. To develop the potential and self sufficiency of young service mountaineers by introducing proven alpinists to the greater ranges.
- c. To create a nucleus of highly motivated mountaineer leaders to take forward the pursuit of high calibre expeditions in the British Services.
- d. To conduct medical research into how exposure to altitude affects memory loss.

The unstated objectives, in order of priority, were to:

- a. Get everybody back in one piece.
- b. Summit.
- c. Get everybody back still talking to each other.

Thankfully, these were all achieved in full.

## EXPEDITION PLANNING IN THE UK

6. Time is of the essence when planning a major expedition, with at least 2 years normally being required. This is especially relevant today with busy unit programmes, reduced manning margins and less flexibility for releasing personnel. The leader requested his release some two and a half years in advance. Luckily the pre-monsoon season coincided with the end of an appointment. Equally luckily, MS was in a good mood and responded positively; effectively calling the leader's bluff as the request was only half serious!

7. Amongst the first decisions must be to select the country, the peak and the season. The latter was effectively decided for us,



however it still warrants careful consideration, as the pre-monsoon season appears to offer better weather conditions than the post-monsoon in the eastern Himalaya. After much research, including hours in the Alpine Club (AC) library, Gimmigela was selected in December '94. It fitted the criteria perfectly: an unclimbed 7350m peak in the remote corner of NE Nepal. Nepal was especially attractive due to the presence of the Summit Trekking agency in Kathmandu. A good agent is vital during the planning and execution phases and Kit Spencer, the Managing Director of Summit Trekking, was well known to the leader and was instrumental with the selection of the peak. Regular E-mail communication with him provided invaluable advice and negated the need for a recce to Kathmandu.

8. Finance must also be considered early on. The difficulty of raising commercial sponsorship (unless you are climbing Everest by a new route) is well known. Accordingly,

fund raising efforts were aimed primarily at service sources with a high personal contribution from all members. It was a logical step, therefore, to seek a prominent military patron. We were honoured and delighted when The First Sea Lord, Admiral Sir Jock Slater, accepted patronage. The next step was to produce headed note paper and a glossy brochure to 'sell' the expedition. This was extremely useful, not only for fund raising but also for raising the profile of the expedition and giving it a degree of 'street credibility'.

9. Whilst in Nepal, RM Stonehouse acted as the parent unit for the expedition. The main purpose of this arrangement was to ensure that a single point of contact existed for any casualty, or other personnel problems arising in Nepal. Accordingly, the CSM at Stonehouse held all NOK details and addresses of our sponsors. This system was also used to distribute regular situation reports and press releases during the climb.

#### THE GIMMIGELA TEAM

10. The most important element of any expedition is, of course, the team. A selection meet was held in North Wales in Aug 96 and the team selected. Subsequently a training meet in Scotland was used to get to know each other and test key equipment. Despite the publication of a Joint Service DCI, getting personnel released from busy units was a major problem. We were most grateful to all COs for releasing expedition members without relief. It was not until 7 March 97, a few days before departure that the final team came together for the first time. The line up was as follows:

Rank	Name	Svc	Unit	Remarks
Maj	PH Parsons	RM	2ic Cdo Log Regt RM	Leader
Lt	AC Wilson	RM	AQM 42 Cdo RM	Dept leader. Food member. Climber - 2nd summit team
WO1	RJ Ewen	RM	RSM Cdo Log Regt RM	BCM / military eqpt
Lt	H Davies	RM	42 Cdo RM	Climber
Lt	C Weeks	Army	Templar Barracks	Climber
Mne	M Hallett	RM	RM Poole	Climber
Cpl	N Peacock	RM	CTCRM	Climber - 1st summit team
Sgt	N Lane	RM	42 Cdo RM	Climber - 1st summit team

Flt	E Atkins	RAF	RAF Spadeadam	Climber - 2nd summit team
Lt	R Magowan	RM	Comacchio Group RM	Individual equipment 2nd Summit team
Lt	P Hart	RN	RNSLAM, HMS Excellent	Climber
Cpl	J Foden	RM	45 Cdo RM	Climber - 2nd summit team
Spr	D Sheridan	Army	MRT, RAF St Athan	Climber
Surg Lt	A Gibson	RN	Cdo Log Regt RM	Doctor

#### NEPALESE PERMANENT STAFF:

Shiva Tapa	Nepalese	Ministry of Tourism	Liaison Officer
Jeetbahadur Sherpa	Nepalese	Summit Trekking	Sirdar
Shamsir Tamang	Nepalese	Summit Trekking	Cook
Sonam Sherpa	Nepalese	Summit Trekking	Staff
Dawa Sherpa	Nepalese	Summit Trekking	Cook boy
Utam Gurung	Nepalese	Summit Trekking	Staff / mail runner

#### THE TEAM AT BASE CAMP



Standing: Paul Hart, Bert Lane, Jeet, Pea Peacock, Utam, Andy Gibson, Marty Hallet, Bob Ewen, Rob Magowan, Shamsir, Dave Sheridan.

Kneeling: Ted Atkins, Shiva, Pat Parsons, Callum Weeks, Tug Wilson, Larry Foden, Dawa, Huan Davies



## THE LAUNCH.

11. The expedition was formally launched by Admiral Sir Jock Slater at The Royal Marines Museum on 7 March 97, just a few days prior to departure. This was our opportunity to meet and thank all those civilian and military agents and individuals who had offered so much support and help. It was also our first press opportunity. The event was opened by a Death Slide from the roof of the museum.

## SPONSORSHIP

12. While fund raising was aimed primarily at Service Funds, every effort was made to attract civilian sponsorship. We were greatly indebted to our sponsors who are listed below:

**Sanofi Winthrop.** The pharmaceutical firm who manufacturer Solpadol, were our major sponsors and contributed £5,000 towards the expedition. We took their flag to the summit.

**Primary Management Services.** PMS (previously Gardener Merchant) who currently hold the catering contract at RMB Chivenor kindly agreed to provide the food and wine at the expedition launch at the Royal Marines Museum.

**Famous Grouse.** Matthew Gloag kindly donated 3 crates of the finest whisky. One was used at the expedition launch and the other 2 were taken on the hill for special occasions and to promote Anglo - Spanish, American, Slovakian and Korean, relations (representing the other expeditions at Base Camp). Most of the whisky was consumed on a single, memorable night when we entertained the Slovakian Kanchenjunga expedition. The Famous Grouse markedly enhanced expedition morale!

**Psion.** Psion agreed to loan the expedition 4 x Series 3a palmtops with peripherals. These were excellent and used extensively. See report at Annex B to Chapter 3.

**The Royal Marines Museum.** The Museum kindly agreed to let us use their facilities, at a token cost, to host the expedition launch.

### **The Royal Sailors Home Club.**

Expedition members stayed at The Royal Sailors' Home Club for the Launch and enjoyed a 50% discount.

**Mountain Equipment.** Offered competitive rates for the purchase of 14 HA sleeping bags. See report at Annex B to Chapter 3.

**Lowe.** Provided 4 free Rucksacks.

**CS Photography MOD.** While not exactly a sponsor, CS Photography MOD copied 120 of the best slides 14 times allowing each member to make presentations of the full expedition. They did an excellent job and provided a first class service.

**Bob Gee Insurance.** Provided an excellent deal for expedition insurance.

**Command Graphics HMNB Portsmouth.** Command Graphics offered invaluable service with 2 separate projects. The first was to produce the expedition 'glossy'. This brochure was used to promote the expedition and was extremely successful. Secondly, they agreed to produce this report. We are most grateful for their support and advice.

## PLANNING HIGHLIGHTS:

Gimmigela selected as objective	Dec '94
First Sea Lord accepts patronage	Dec '95
JS DCI Issued	Jan '96
British Mountaineering Council (BMC) endorsement	Jan '96
Brochure produced	May '96
ATF Approved by DNPTS	July '96
Team selection / training meet	Aug '96
Joint Services Expedition Trust (JSET) endorsement	Oct '96

Team training - Scotland	Dec '96
Mount Everest Foundation (MEF) endorsement	Dec '96
Equipment dispatched by sea	Jan '97
Expedition launch	Mar '97
Advance party depart for Nepal	Mar '97

### **PREPARATIONS IN KATHMANDU.**

13. The team spent a week in Kathmandu prior to departure for the mountains. This time is necessary to prepare the loads for the mountain, complete last minute preparations and tackle the inevitable barrier of red tape and bureaucracy associated with expeditions in Nepal. A good trekking agency to guide one through this formidable maze is essential. We were most fortunate in this respect and Summit Trekking guided us step by step. Even with an advance party to prepare the way, this was a busy time for all.

14. The leader was preoccupied with the tedious but vital business of securing peak permits, radio permits, trekking permits etc. Once again, Summit Trekking had prepared the way admirably, however, the obligatory trip to the Ministry of Tourism and Aviation is still necessary for an official briefing. A call on the Assistant Military Attaché (AMA) in the British Embassy was also made. For Service expeditions, the AMA is the point of contact for any military business including, heaven forbid, casualty procedures. A close working relationship was also developed with HQ British Gurkhas Nepal (BGN) who were instrumental in securing the smooth passage of our freight into Nepal.

15. The Base Camp Manager (in our case also the equipment member) was equally preoccupied; acting as expedition CSM, CQMS and storeman all at once. Luckily, Bob Ewen had done all of these jobs before and remained calm and collected throughout. The food member was similarly busy and equally well qualified being the AQM of 42 Cdo RM! With help from the team they broke down 3.5

tons of freight into 25kg porter loads, most of which would not be opened until our arrival at BC. They also prepared the food, issued all individual clothing and equipment and devised various methods of tracking these goods. See Chapter 3 for further details.

16. Those not directly involved with this game of snakes and ladders were employed on another one: bartering in the Kathmandu bazaars for the best deal on last minute equipment purchases. Titanium ice screws were especially good value, however, practically everything was available at similar prices as in the UK but not necessarily the same quality. We were concerned that we did not have enough fixed rope and were able to buy more. This turned out to be of crucial importance.

17. It was not all work, however. This was a fine opportunity to sample the unique cultural delights of Kathmandu, a happy, dirty, noisy melting pot of Easterners, Westerners, Hindus and Buddhists. There was also the odd run ashore - or two!

### **ACCOMMODATION IN KATHMANDU**

18. The team stayed at the Summit Hotel which is co-located with Summit Trekking. This was extremely convenient and saved much travel time. The hotel provided the ideal base for an expedition of our size. It is set apart from the grime and hussle of downtown Kathmandu, in a peaceful and tranquil setting. Accommodation is clean and reasonably priced and 'Holland House' offers a separate block for group bookings. The expedition was offered 30% discount on all purchases and accommodation and we were treated extremely well.

19. Once prepared, the loads were dispatched by bus to Basantapur, the roadhead for the trek. Bob and Pea accompanied the gear while the rest of the team followed 24 hours later. It was a long, sweaty, bone-jarring journey. The first day was 14 hours long with an overnight stop in



a dingy, flea-infested guest house in Darhan. The following day took 5 hours to Basantapur where team and gear were reunited.

### **APPROACH MARCH**

20. The trek in to Pangpema base camp (BC) took 14 days from Basantapur. The route is shown at Annex A. The approach march is a fundamental part of any Himalayan expedition; it allows time to mentally and physically adjust and prepare for what is to come. It is also the time when a team is formed from a group of disparate individuals. Additionally, it is an invaluable cultural opportunity to witness a unique people in a unique countryside. Rural Nepal is rugged in the extreme and so are the people who live in its foothills; the hardships they routinely endure were an example to us, as was their cheerful and friendly disposition. The transition from the lowland Hindu culture to the highland Tibetan / Buddhist culture was fascinating.

21. Our train comprised 14 team members; a Liaison Officer, 5 BC staff and 196 local porters each carrying 25 kg of food and equipment for 150 rupees (£1.66) a day. The route is now a recognised trekking route, recently opened to commercial groups. However, due to its length and altitude it is rarely done. It was described by the late Pete Boardman as one of the most beautiful treks in the Himalayas. The middle section follows the Tamur and Ghunsa Kholas (rivers) through steep, spectacular valleys. In places, the track seemingly defies gravity passing through near vertical terrain, described in a trekking guide as 'the most exposed track in Nepal'. Watching Ted's Shed (comprising 10 porter loads the size of doors), negotiating this stretch was a spectacle more alarming than any climbing to follow! The latter stages, from Ghunsa to Pangpema, were taken particularly slowly to aid acclimatisation. Even so, there were many thick heads as we climbed above 13,000 feet. We spent 2 days in Ghunsa and a day in Kambachen acclimatising.

22. The character of the route changes markedly above Ghunsa, as do the portage charges. Ghunsa is the last permanent habitation before BC and the route above is steep and difficult, a fact not lost on the inhabitants who charge inflationary portage prices to negotiate it. Sadly many expeditions simply throw money at the problem to avoid confrontation and delay, further inflating prices (up to Rs 400 per day).

23. We calculated that it would have cost us no more to fly all of our kit into BC in a single helicopter lift which is readily available from Kathmandu. Unless they are careful, the inhabitants of Ghunsa will price themselves out of the market. Pointing out this fact, and that it was 'us' (well, the British Army!) who installed the Ghunsa water stand pipes in 1985 during the Kirat Chuli Expedition, had a miraculous effect when negotiating porter prices!

### **BASE CAMP (BC)**

24. Pangpema, a summer time yak pasture at 5139m, was an ideal BC location. At the confluence of the Kanchenjunga Glacier it was set in magnificent surroundings with stunning mountain views. Particularly impressive were Wedge Peak and, of course, Kanchenjunga. Normally a remote and isolated spot, this season we shared Pangpema with 4 other expeditions: Spanish, Slovakian, American and Korean, all attempting Kanchenjunga's North Face.

25. Accommodation was in North Face Himalayan Hotel tents which, with 3 members per tent, provided roomy and comfortable accommodation with adequate space for personal effects. The 'mess tent', commonly known as 'Ted's Shed', was a prefabricated hut made of plywood and perspex panels. Large enough for 14 members to eat in one sitting, the shed provided an ideal mess tent being light, robust and secure. It was well worth the 10 porter loads required to carry it and was tastefully decorated with graffiti and pin-ups of general interest - all in the best possible taste!

26. Stores were kept secure in a dedicated stores tent and a lean-to set up against the shed. Luckily we suffered few losses; the Spanish had a large sum of money and camera equipment stolen from their tents.

27. From BC the entire route could be seen and an array of telescopes was normally established outside the shed. It was also an excellent communications site with line of sight to all camps.

#### **THE CLIMB**

28. See Chapter 2.

#### **THE MARCH OUT**

29. After the climb we were joined by an independent trek group, led by Lt Cdr Andy Mills RN. They spent one day at Pangpema before we all moved out together. At Ghunsa the trek group split, with some visiting Kanchenjunga South base camp and the rest trekking out with the expedition.

30. We took the same route out as far as Chirwa from where we branched off to Suketar, the nearest airhead, which we reached in 8 days from BC. From Suketar the team flew to Biratnagar and then to Kathmandu. The freight, under the watchful eye of Larry and Callum and the base camp staff was driven back via Kabeli Khola and Phidim, arriving in Kathmandu on 29 May.

#### **WEATHER FORECASTING**

31. Arrangements were made with Lt Cdr Neil Hicking RN at the Fleet Weather Operations Centre to provide regular, up to date weather reports on the satcom. A message format, showing temperatures, wind speed and direction at 24,000 feet in our area was agreed before departure. The arrangement worked well and other expeditions at BC were envious of this facility. While the information was generally accurate, it was difficult to forecast ahead with any degree of confidence. Whatever the reports - it snowed most afternoons!

#### **PUBLIC RELATIONS**

32. Our remit was to generate maximum publicity and all PR issues were dealt with by CSgt Pete Carr at HQRN. CSgt Carr provided an excellent service by organising extensive local newspaper and TV coverage before departure and live radio broadcasts at the Launch. After the live summit call with The First Sea Lord, he organised a number of live radio interviews with the leader at BC. A press release was distributed the day after the summit. On our return to the UK, numerous newspaper and magazine articles were written.

#### **PHOTOGRAPHY / PRESENTATIONS**

33. DNR provided Fujichrome slide film for the expedition. On return to the UK, individual members were responsible for developing their own film and presented their best shots at the post expedition meet in the Peak District in June. Our best 120 slides were selected and reproduced 14 times by CS Photography MOD. Each member was then issued with a 'presentation pack' for the various presentation commitments undertaken.

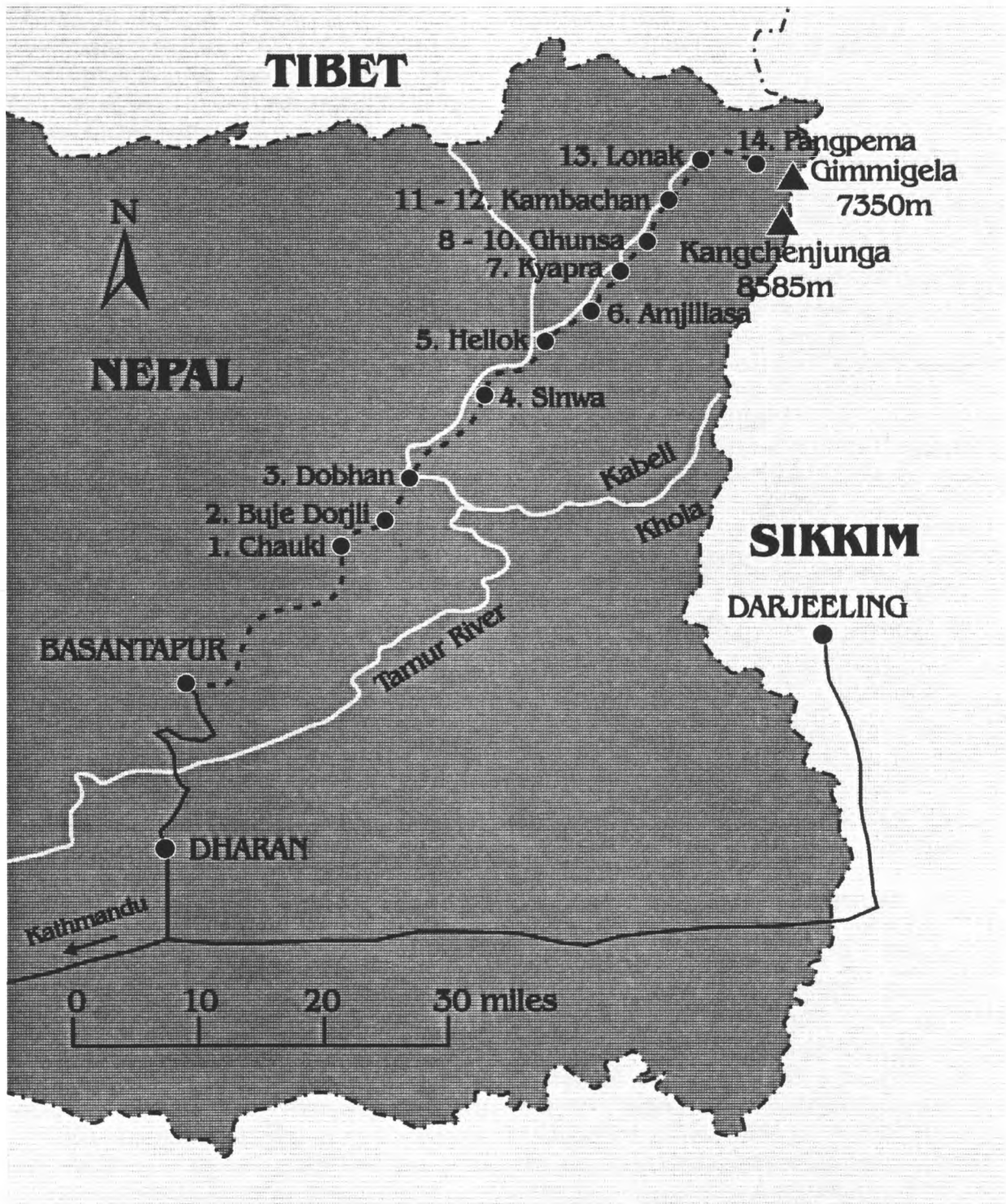
34. A condition attached to the grant from RM Central Funds was to undertake a 'recruiting road show' on our return to the UK. DNR arranged suitable venues and, as this report goes to print, team members are preparing for the roadshow.

Annexes:

- A. Diagram showing the approach march route.
- B. Expedition Diary.



ANNEX A DIAGRAM OF APPROACH MARCH ROUTE



THE 14 DAY APPROACH MARCH ROUTE TO BASE CAMP

## **ANNEX B GIMMIGELA DIARY**

- 9 March Adv party depart UK.
- 10 March Adv Party Arrive Kathmandu.
- 14 March Main Body fly to Kathmandu from LGW, overnight Qatar.
- 15 March Main Body arrive Kathmandu, based at Summit Hotel. Puja, meet Summit Trekking staff.
- 16 March Pack stores in Kathmandu.
- 17 March Complete packing. Team meal at KCs restaurant.
- 18 March Bob and Pea depart with expedition stores for road head at Basantapur.
- 19 March Team depart Kathmandu for Basantapur by bus. Meet LO. Overnight Darhan.
- 20 March Complete road journey to Basantapur. Views of distant Makalu massif. Overnight Yak guest house, Basantapur.
- 21 March Porters collect loads and depart. Commence trek to Base Camp. Chauki (2700m) overnight.
- 22 March Morning views of Makalu massif. Trek through Gupha Pokhari (2930m) and overnight at Buje Deorali (2842m).
- 23 March Downhill to Dobhan (640m). Camp by Tamur River. (Tamur Khosi)
- 24 March Travel up Tamur River, through Mitlung (800m) and to Sinwa (900m). Rising heat.
- 25 March Continue up Tamur Khosi, lunch at Chirwa (1190m), past Buddhist graves and on to Hellok (1450m)
- 26 March Through Sokatum (1640m), into Ghunsa Kola, up steeply to lunch at Ghairya Bari (2000m) and so to Amjilassa (2496m). This section of the route is described as 'the most exposed track in Nepal'.
- 27 March Follow Ghunsa Kola to Kyapra (2730m) Views of Nango Ma and others.
- 28 March Phere (3150m). Slow ascent to Ghunsa (3430m). Some members sample local hospitality and made very welcome!
- 29 March Acclimatisation day. Teams walk up to 4000m and return. Dancing girls in evening.
- 30 March Larry produces Cream Eggs for Easter Sunday breakfast. Porter problems necessitate another day in Ghunsa in the snow.
- 31 March Slow ascent through Rambuk Kharka for lunch and overnight Kambachen (4040m) in developing wind and cloud. A yak is killed crossing a steep scree slope.
- 1 April Kambachen - acclimatisation day. Pay for dead yak - Rs 10,000.
- 2 April Slow, steady approach to Lonak (4800m) through Ramtang. Stunning views of Merra and Kambachen peaks. Headaches at Lonak.
- 3 April Team crawls in to Pangpema Base Camp - 5139m in thinning air. Spanish team (N Face Kanchenjunga) already ensconced. Starts snowing.
- 4 April Unpack stores in inclement weather. Spanish leader (Inyaki) visits.
- 5 April Ted & Marty recce route to ABC across Kanchenjunga Glacier. Take 6.5 hrs to cover half the route in fresh snow.
- 6 April Tug and Pea recce tortuous route to Pathibara Peak.
- 7 April Load carrying up Kanchenjunga glacier and dump at a provisional ABC (5200m). Ted and Larry remain there. An unacclimatised team suffers in the heat.
- 8 April Half team carry to provisional ABC site. Ted searches for a better site. Result: loads dumped all over the place. Puja at BC at 1800hrs.
- 9 April Temporary eqpt dump (ABC Dump) established at 5280 m. ABC (C1) also established at 5580m and occupied by Ted & Larry.

## **ANNEX B GIMMIGELA DIARY**

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- 22 March Morning views of Makalu massif. Trek through Gupha Pokhari (2930m) and overnight at Buje Deorali (2842m).
- 23 March Downhill to Dobhan (640m). Camp by Tamur River. (Tamur Khosi)
- 24 March Travel up Tamur River, through Mitlung (800m) and to Sinwa (900m). Rising heat.
- 25 March Continue up Tamur Khosi, lunch at Chirwa (1190m), past Buddhist graves and on to Hellok (1450m)
- 26 March Through Sokatum (1640m), into Ghunsa Kola, up steeply to lunch at Ghairya Bari (2000m) and so to Amjilassa (2496m). This section of the route is described as 'the most exposed track in Nepal'.
- 27 March Follow Ghunsa Kola to Kyapra (2730m) Views of Nango Ma and others.
- 28 March Phere (3150m). Slow ascent to Ghunsa (3430m). Some members sample local hospitality and made very welcome!
- 29 March Acclimatisation day. Teams walk up to 4000m and return. Dancing girls in evening.
- 30 March Larry produces Cream Eggs for Easter Sunday breakfast. Porter problems necessitate another day in Ghunsa in the snow.
- 31 March Slow ascent through Rambuk Kharka for lunch and overnight Kambachen (4040m) in developing wind and cloud. A yak is killed crossing a steep scree slope.
- 1 April Kambachen - acclimatisation day. Pay for dead yak - Rs 10,000.
- 2 April Slow, steady approach to Lonak (4800m) through Ramtang. Stunning views of Merra and Kambachen peaks. Headaches at Lonak.
- 3 April Team crawls in to Pangpema Base Camp - 5139m in thinning air. Spanish team (N Face Kanchenjunga) already ensconced. Starts snowing.
- 4 April Unpack stores in inclement weather. Spanish leader (Inyaki) visits.
- 5 April Ted & Marty recce route to ABC across Kanchenjunga Glacier. Take 6.5 hrs to cover half the route in fresh snow.
- 6 April Tug and Pea recce tortuous route to Pathibara Peak.
- 7 April Load carrying up Kanchenjunga glacier and dump at a provisional ABC (5200m). Ted and Larry remain there. An unacclimatised team suffers in the heat.
- 8 April Half team carry to provisional ABC site. Ted searches for a better site. Result: loads dumped all over the place. Puja at BC at 1800hrs.
- 9 April Temporary eqpt dump (ABC Dump) established at 5280 m. ABC (C1) also established at 5580m and occupied by Ted & Larry.



- 10 April More loads carried to ABC (D). Ted and Larry search for the best route onto Gimmigela's South West Ridge.
- 11 April Most of Ted's team now either at ABC or the Dump. Larry and Ted start to place fixed lines onto the lower ridge.
- 12 April Larry and Marty lead the route up the rocky ridge, grading it alpine AD+ but loose. Others carry in support.
- 13 April Marty and Rob continue to fix the line whilst others support. The route continues to be sustained, loose and difficult.
- 14 April Rob and Ted make slow progress upwards, retreating at an awkward rock buttress just before a prominent snow field in deteriorating weather.
- 15 April Rob and Paul successfully develop the route onto the airy snow field (6000m). Still frustratingly well short of proposed Camp 2.
- 16 April Rob, Bert and Tug continue to climb up rock steps on right (south) side of snow field, fixing to 6150m on loose rock. No sight of Camp 2.
- 17 April Tug and Bert make little progress on ridge as weather closes in. Pea works on improving the safety of the ropes on the ridge. Tug's team now replaced Ted's at ABC. Pat identifies alternative gully route leading to C2. Heavy snow fall in PM puts paid to any plans for tomorrow.
- 18 April Enforced rest despite glorious weather. Dave moves up to ABC.
- 19 April Ferry loads to ABC. Tug and Bert try to push out the original line but make little progress on ridge, reaching 6200m. Pat moves to ABC.
- 20 April It's taking too long to climb up the ropes each day, therefore Tug's team establish a tent (Intermediate Camp) at 6000m on ridge. Pea and Bert occupy it, in preparation for pushing up the ridge.
- 21 April Bert and Pea discount further progress up the mixed ridge. Others ferry loads to Intermediate. Pat & Tug straighten the fixed ropes into gully - a safer line.
- 22 April Ted replaces Tug at ABC. Pea and Bert make progress in Pat's gully to right (south) of the West Ridge. Decision made to change route and follow the new gully.
- 23 April Larry and Marty occupy Intermediate camp having stripped the upper ridge of its rope & fixings. Ted's team replace Tug's team at ABC. "Camp 2 tomorrow" has been the cry for the last 7 days!
- 24 April Larry and Marty push the route in the upper gully (grade III) Ted and Rob carry up stores for Camp 2 but have to cache them as it's still not established. Bob and Andy move up to ABC.
- 25 April Larry and Marty reach top of gully just short of C2. Ted and Rob lead through to the knife edge ridge and establish an airy campsite on it at 6300m.
- 26 April Rob leads prominent ice tower - 'The Ice Monster' (grade IV, led on 6mm rope) which provides the key to Camp 2 (at last) and to the entire lower part of the (new) route. 6400m. Decision made not to attempt Pathibara.
- 27 April Loads carried to ABC but needed higher up. Ted and Rob come down. Tug's team prepare to move higher to take the lead.
- 28 April Climbing teams are reorganised to speed progress. Marty & Larry collect rope from Spanish C1. Loads to Camp 2 and Intermediate. Lincoln Rowe arrives at Pangpema.
- 29 April Paul and Callum carry to C 2. Pea and Bert move up from ABC to occupy C2.
- 30 April High winds and snowfall all day. Wind blast from large avalanche on Kanch causes damage to tent at Intermediate camp and shakes occupants! Little progress on mountain due to weather.

- 1 May Pea and Bert make rapid progress from Camp 2, running out rope up the prominent whale back feature above. Maintenance of fixed ropes continues between ABC & Intermediate. Apparently there was a General Election today!
- 2 May Pea and Bert continue to push the route out despite unsettled weather, fixing only the difficult sections. Tug and Larry move up to Camp 2.
- 3 May Tug and Larry take the lead and push the route over the whale back ridge. Estb Camp 3 at 6750m. Paul discusses load carrying duties with Pat on the radio!
- 4 May Larry and Tug reach a high point of 7000m and return to Camp 3. The next lead pair (Ted & Rob) and support pair (Paul & Marty) arrive at Camp 2.
- 5 May Attempts to reach Camp 3 thwarted by high winds. Paul falls and is held by Marty. Marty suffering from cold feet and descends to BC. Deteriorating weather.
- 6 May Ted and Rob move up to Camp 3 to take the lead. Carries to Camp 3 fail for the 2nd day running. Callum, who is suffering, is helped down to C2 by Paul.
- 7 May First summit bid fails when Ted and Rob reach 7150m and retreat, in a worsening snowstorm, to Camp 3 which they reach at 1745 hrs.
- 8 May Ted and Rob fail to make Camp 4 but cache its stores at 6900m. They are forced to descend, exhausted, to Camp 2 in high winds and whiteout. Pea and Bert occupy Camp 3 in preparation for the lead tomorrow.
- 9 May Pea and Bert establish Camp 4 at the top of the next whale back ridge at 7050m in severe winds. Marty fails to make C2 for tomorrow's lead. Tug therefore teams up with Larry again. As Rob & Ted are feeling OK, it is decided that they should remain at C2 for the 2nd summit bid. Pat descends to ABC.
- 10 May Pea and Bert depart Camp 4 for second summit bid in high winds and inclement weather, moving on to the S side of the ridge, right of the prominent rock tower. After some extremely difficult climbing in severe gales, they reach the summit at 1600hrs. First Sea Lord speaks to Pea on Satcom link. Long descent, reaching Camp 4 at 1900 hrs as darkness falls.
- 11 May Tug & Larry, Ted & Rob move up to different Camp 4s as separate climbing pairs. Pea and Bert descend to Camp 2, for support if required. Start stripping ABC. Ironically, the weather is perfect! Press release to HQRM on satcom.
- 12 May Tug, Larry, Ted and Rob make the 3rd summit bid in settled weather and light winds. All 4 summit at 1200hrs. Live satcom link to Brig Nicholls. Teams descend to respective Camp 4s before dark. Stripping of lower mountain continues. Pat (at BC) and Pea (at C2) conduct live radio interview with BBC Solent using satcom and VHF radios.
- 13 May Yesterday's summiteers descend from C3 to Camp 2 stripping the fixed rope as they go. The ice tower is traversed for the last time (thankfully). Marty and Huan strip between Int & C2, only getting in to ABC after darkness. All team members spend night at ABC or BC. Live radio interview with BBC Radio Devon.
- 14 May Marty and Huan make the last trip up to Intermediate to strip the ropes from the lower part of the route - a sterling effort. The stripping of ABC continues.
- 15 May The last carry with all hands to the pumps to complete the stripping of ABC. All team members return to BC and the mountain is clear. Memorable celebration with the Slovakian Kanchenjunga team in Ted's Shed!
- 16 May Team rest (and recover!) in preparation for departure. 16 loads leave BC by Yak.
- 17 May Ted's Shed dismantled and other stores packed. Trekking party arrive at BC.
- 18 May Expedition and trekkers depart Pangpema for Kambachen. News of Roddy McArthur's accident (US Kanchenjunga Expedition) reaches Pat by runner. Satcom used to summon helicopter rescue.

- 19 May Team moves from Kambachen to Ghunsa. Roddy McArthur is rescued and flown to Kathmandu. Afternoon spent buying carpets.
- 20 May Elements of trekking party depart for Kanchenjunga South Base Camp. Remainder travel to Kyapra in the rain.
- 21 May Team moves from Kyapra to Sokatum via Amjilassa (lunch). Heavy rain in the evening.
- 22 May Morning walk to Chirwa and overnight halt. Further rain.
- 23 May Move from Chirwa up above Tamur Khosi towards Suketar, stopping at Phurumba (1900m) overnight. A long day for the porters.
- 24 May Short journey to Suketar (2300m) in morning, arriving 1400hrs after lunch.
- 25 May Fly to Kathmandu via Biratnagar, arriving at 1500hrs. Transit to Summit Hotel and Kit Spencer's reception party. Callum and Larry remain with equipment at Suketar and will travel overland to Kathmandu.
- 26 May Local elections in Nepal. No transport on the roads. Team relax at Summit Hotel.
- 27 May R and R trips to Pokhara and Chitwan National Park.
- 28 May R and R.
- 29 May Pokhara and Chitwan parties return. Equipment and escorts arrive Summit Hotel.
- 30 May Team repack stores in preparation for departure. Team and support staff meal in evening.
- 31 May Final team administration.
- 1 June Majority of team depart for UK, arriving LHR early evening.
- 4 June Pat and Bob depart for UK.



The view from Base Camp on the first day. Peaks from left to right: Cross Peak, Gimmigela, Kanchenjunga.





# CHAPTER 2 - CLIMBING REPORT

## THE PLAN

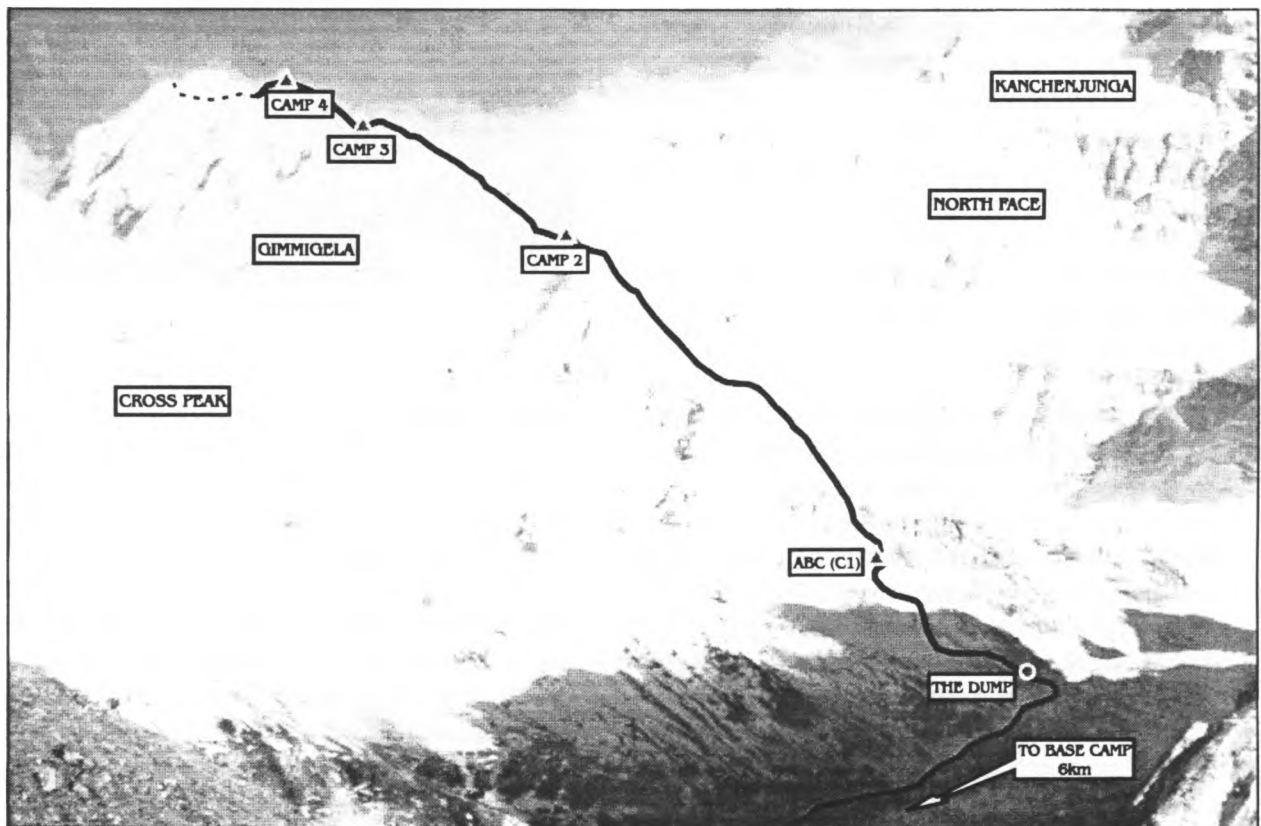
1. The South West Ridge was identified from photos in the UK as our preferred route. It appeared to offer the most natural and safest line to the summit. This was confirmed when we first saw it. The route followed the true line of the ridge from foot to summit and was particularly attractive, having never been attempted before.

2. As a Services team, our aim was to get as many people as high as possible for all to benefit in equal measure. We therefore elected to climb in traditional style using tented camps and fixed ropes. The nature of the route does not favour an alpine style ascent in any case. The ridge is over 3km long and the vertical height gain from glacier to summit is 2150m. In the event, about 1500m of rope was fixed (and stripped after the climb). No high altitude porters were used and oxygen was taken for medical treatment.



ABC (Camp 1) with Dromo in the background

3. We divided the team into 2 climbing groups led by Tug and Ted, leaving the leader free. The Base Camp Manager and doctor, were on trekking permits and, officially, not allowed above BC. In the early stages the 2 climbing groups alternated between climbing and supporting. After 3 weeks it became clear that this even-handed approach was partly



The route followed the South West ridge to the summit

responsible for the slow rate of progress. In the upper reaches, therefore, the 6 strongest members were selected to push the route out whilst everyone else supported their main effort. This approach won the day and the 6 selected lead climbers all summited.

#### **BC - ADVANCED BASE CAMP (ABC)**

4. The route from BC to ABC is some 6 km in length and, for the most part, follows the Kanchenjunga Glacier. It was the most frequently travelled part of the entire route with most members traversing it at least a dozen times. The route itself was tedious and mind numbing, the only relief being the staggering mountain views in every direction. From BC a 400 foot descent was made down onto the main glacier - a real gut buster on the return trip. Once on the glacier, the first section resembled a trek through a 'Dr Who' set with enormous, scree covered ice penitents frequently covered with fresh snow.

5. The next section was on snow and ice and followed the main glacier towards Kanchenjunga. Flatter than the first section, the going was easier, especially after a hard freeze. However, during the heat of the day, the glare and heat were intolerable. Early starts were the order of the day. Latterly, as winter receded, some small crevasses opened up and rivers appeared from nowhere, right across the main track. To cross them we were frequently wading up to our knees (or chest, in Larry's case!).

6. Initially, ferrying a load from BC to ABC in a single push was too much. We therefore established a temporary camp site known as the Dump, or ABC (D), where loads could be dumped before the final push up to ABC the following day. It was a long, steep slog up a glacial moraine from the Dump to ABC. ABC itself was in a magnificent position overlooking the main glacier with stunning views of Pangpema, Wedge Peak, Ramtang and of course, Kanchenjunga's North Face just a stone's throw away - or so it appeared. The fastest and slowest time records from

BC to ABC were 2 hrs 30 mins and 8 hrs 15 mins respectively!

#### **ABC - CAMP2 (C2)**

7. ABC (C1) was sited as high and as close to the foot of the route as possible. From tent doors to clipping onto fixed ropes was a 5



Bob and Paul monitor progress from BC with Wedge Peak in the background

minute walk. A characteristic problem with this part of the route was one of perspective. From BC it looked like an easy 45 degree plod. In reality it was steep and sustained mixed climbing all the way to C2, some 800m above. This was the hardest part of the climb and took 17 days to complete. From below, the route was grossly foreshortened and the cry "Camp 2 tomorrow" every day for 10 days became slightly wearing. Half way up, the lead climbers frequently became 'lost' in the vastness of the mountain and found it difficult to judge their relative position and indeed,

the way ahead. Only by standing back (on the other side of the glacier) was the full picture seen and the key gully leading to C2 identified.

8. As the route progressed it took more and more time to reach the previous day's high point and progress, already hindered by daily afternoon snow storms, slowed right down. A half way camp known as 'Intermediate' was, therefore, precariously established on the ridge above the first snow field. The line up to this point was climbed and descended a great deal and much time was spent improving, replacing and doubling the fixed ropes where necessary.

9. From ABC to Intermediate the route followed a steep snow gully, a loose and exposed rock ridge and a short snow field and took about 4 hrs on average. The ridge comprised towers of shattered blocks perched amongst razor sharp slates. The climbing was precarious with moves of HS and Scottish II / III. The fixed rope was in constant danger of being cut and the entire line was eventually moved into the adjacent gully (where it was merely avalanched instead!). A variety of protection devices were used to secure the rope to the shattered rock. Camming devices were particularly effective, but pegs less so, as Callum will testify!

10. Above Intermediate, the climbing changed in character. Far from easing off, as we fervently hoped it would, it became steeper. The exposed and very steep mixed ridge above Intermediate was climbed for about 500ft before we realised it was a dead end. It was therefore stripped and the focus shifted to a steep ice gully (spotted from the other side of the glacier). For over 300m the gully steepened until it reached the near vertical 'ice monster', so named after its gleaming eyes and gaping mouth of a crevasse. The run out from the gully was even longer, some 1000m straight down on to the Kanchenjunga glacier. From Intermediate, it

took a further 6 days to reach the ice monster which proved to be the key to the route as it led up to C2 and the main Gimmigela ridge. Rob led the ice monster, a very good effort on 6mm static rope!

11. The load carriers, towards the end, were able to complete a carry from ABC to C2 in a single day, indeed, they had to, to keep the supply route open. This was an especially hard day and took between 6 - 7 hrs.

### **C2 -C3**

12. C2 was not established until 26 April, over 3 weeks after our arrival at Pangpema. It was increasingly clear that, at this rate, we would not summit in the next 2 weeks which we needed to if we were to strip the mountain before our departure. We were barely half way up! A reorganisation was called and the existing teams disbanded. From C2 upwards, 3 pairs of the strongest lead climbers were selected to push hard until they reached the summit. Each pair would rotate the lead for 3 days and then be replaced without losing momentum. The rest of the team were dedicated to supporting the leaders and a plan drawn up detailing individual duties over the next 2 weeks. Of course, it all depended upon the weather.

13. Camp 2, at 6350m, was perched on an excellent site with stunning views of Makalu and into Tibet. The climbing above was more open snow and ice on the main SW ridge of Gimmigela. Up to this point the whole route had been fixed; above it would only be fixed on the steepest sections. The conditions improved with height as the winds blew any fresh snow away before it could settle. We used our lightest equipment, fixing 6mm ropes to reduce weight, abandoned the comfort of Quasar tents for the tiny Gemini assault tents and ate only freeze-dried rations. As the route progressed along the ridge and the lines of communication extended, so it became harder to support the lead climbers.



14. The wind and cold intensified. We had to keep moving on this magnificent knife edge ridge with few breaks for chocolate or drinks. Twice, teams failed to reach C3 because of the severity of the winds and were forced to turn back. It was here that Paul Hart was blown off, he fell a full rope length and was held by his partner, Marty Hallett - a sterling effort. Camp 3 was established at 6700m on 4 May by Tug and Larry. It was the same site as used by the Japanese some 18 months earlier and marked the end of the new ground. The route above followed their general line to the summit.

**C3-C4 - THE FIRST SUMMIT BID**

15. Camp 3 had atmosphere; it clung on to a steep slope with an alarming degree of exposure. It was not as comfortable as C2, however, and the Gemini tents were coffin-like compared to the Quasars below. Time now presented a new pressure. We had completed the difficult climbing and yet defeat was staring us in the face. Our time left was measured in days and each day brought worsening conditions as we climbed higher.



Pea Peacock on the summit - 10 May (Photo: Burt Lane)



Tug Wilson, Larry Foden and Ted Atkins on the summit - 12 May (Photo: Rob Magowan)



16. The first summit bid was, perhaps, a little ambitious starting from C3. There were other problems; a huge tower on the ridge above, christened 'The Cioch', blocked the way to the summit. The team set off full of characteristic, if unfounded, optimism - into the wind. After 8 hours the Cioch had still not been reached and visibility became limited by the driven snow. They pressed on and climbed the Cioch, however the day was nearly done and with no summit in sight, Ted and Rob turned to face the long retreat back to C3.

### THE SUMMIT

17. A higher camp was required for the next team to have any chance of summiting. Despite deteriorating conditions and against all expectations, Pea and Burt establish C4 at 7050m the following day. They were now above any fixed ropes and on their own. After a delayed start on 10 May, they set off into a gale for the summit. They elected to drop down from the main ridge onto the S side of the mountain, effectively bypassing the Cioch.

18. The climbing was initially across a highly unstable avalanche prone slope some 5,000 ft above the upper Kanch glacier. The wind continued to increase and was gusting up to 90 mph, adding to the sense of commitment. Time was running out and exhaustion setting in as they reached the first false summit. Pressing on, the wind forced them to drop down from the ridge until finally, they climbed a final steep ice gully leading to the summit ridge. The pair eventually summited at 1600 hrs after a supreme effort and an epic climb.

### THE VIEW FROM BASE CAMP

"On my way down from ABC I kept looking back up at the mountain. There was a jet-stream plume coming off the summit and my heart sank. No chance of a summit today and time is running out like sand through my fingers. I knew that Pea and Bert had made a late start this morning because of the wind and, no doubt, they would soon be turning back. I hope they make it down to their tent OK in this wind. At BC Huan tells me they were 250m from the summit on their last

radio call. Better news than I had ever dared hope for.

At 1240, Pea calls up to say he is just 5m from the summit and is bringing Bert up to join him. He'll call again when they're both up. UNBELIEVABLE! Jubilation and congratulations all round. Grab the satcom and flash up CinCFleet. Create a bit of a stir by asking to speak to the First Sea Lord, (I had forgotten it's Saturday!) Eventually persuade the Duty Fleet Controller it's not a wind up and I am given Admiral Slater's home number. He is expecting my call in a couple of minutes.

A tense hour later, Pea comes up to say he is an hour from the summit and the wind is horrendous. DEJECTION! It must have been a false summit - I thought it was too good to be true! The tension in Ted's Shed is unbearable for the next hour. Pea's next call does nothing to calm us. He is now just 2 pitches from the summit but on a pitch of 'grade V'.

I leave the shed for some relief. Looking through the telescope the summit is clogged in. Then, all of a sudden it clears, and yes, there they are! 2 tiny figures crawling up to the summit! We really have done it this time! In 2 minutes Admiral Sir Jock Slater is personally congratulating the summit pair who, naturally enough, think it is a bite!"

19. The 2nd bid was made 2 days later by the remaining 4 lead climbers. The conditions were still cold but less windy and it did not snow. They took a slightly different line but the climbing was excellent and they enjoyed the stunning views denied to the first team.

20. We climbed our mountain with one day to spare and were extremely lucky to get the weather windows during a prolonged period of poor weather. The same weather caused 3 out of 4 international expeditions to Kanchenjunga to fail. The trick now was to get everybody down in one piece. Always the most dangerous part. This was not rushed as it was our intention to recover everything from the hill back down to BC. In the event everything went well and we left only a short section of fixed line on the ice monster.



Map showing the location of Gimmigela and the route between BC and ABC



# CHAPTER 3 - EQUIPMENT REPORT

## GENERAL

1. Previous expedition reports were used to develop the equipment plan, specifically the British Services Everest Expedition '88 and the Manaslu North Expedition '83. Our policy was to use as much service equipment as possible, supplemented with individuals' personal kit. A small equipment sub-committee was formed and the first meeting took place more than a year before the expedition started. The equipment list was drawn up and responsibility appointed as follows:

Base Camp Stores	Bob Ewen
Service Provided Stores & Equipment	Bob Ewen
Personal Purchases	Rob Magowan
Film, Video and Group Purchases	Paul Hart
Medical Stores	Andy Gibson

## MILITARY PROCUREMENT

2. Military equipment was procured through the following sources:

### **Thatcham Adventure Training Store.**

The AT store at Thatcham provided the expedition with a first class service from July 96 when it was agreed they would support us. The quality of the equipment was of the highest standard and top of the range and suited our needs admirably. The 'Expedition store', in particular, has improved its range beyond measure in recent years. Initially we selected equipment from the AT catalogue and in September we went to Thatcham to physically view it and confirm the order. Certain items, which were not available, were purchased specifically for the expedition. The Thatcham staff were extremely helpful and flexible and able to respond to last minute changes, especially when the sea freight was called forward earlier than anticipated. A list of equipment drawn from Thatcham is at Annex A.

**RM Mountain and Cold Weather Warfare Store Bullpoint.** Most of the climbing hardware and certain items of cold weather clothing and equipment came from the M&CWW Store after authorisation from 3 Cdo Bde RM and HQRM. Fixed rope was also demanded but as 9mm static rope is not currently in use by the Brigade they were unable to demand any. They did however provide the 9mm climbing ropes and assisted in our purchase of 6mm static rope from Marlow. The main consumable item provided was the Butane /Propane 250 gm gas containers, for cooking above ABC. Snow stakes and 3 EPI gas cookers were drawn from Brigade Patrol Troop. Like Thatcham, the service and stores provided were of the highest order. With both stores, an early and direct liaison was important. A list of equipment drawn from the M&CWW Store is at Annex A.

**Cdo Log Regt RM.** Cdo Log Regt RM was the accounting unit for all equipment demanded. It also provided most of the Base Camp consumables. We are most grateful to the QM and his staff for their invaluable help and advice during a particularly busy period. It was essential to have access to the QM facilities and expertise for demanding and accounting for stores. Those items drawn from the QM's Department are shown at Annex A.

**Miscellaneous Service Stores.** The high powered Questar telescope was provided by RM Poole and self focusing binos from CTCRM.

**Equipment from the Gasherbrum Expedition.** The Gasherbrum expedition still owned a substantial amount of equipment after the successful ascent of Gasherbrum in 1996. Clothing, originally purchased by Nuffield Trust money, was made available to us on agreement from the RAF. This enhanced the down, fleece and Pertex equipment provided by

Thatcham. A list of equipment from the Gasherbrum expedition is at Annex A.

**The Nuffield Trust.** The bid for a Nuffield Trust minor grant to purchase 14 high altitude sleeping bags was successful. On completion of the expedition, the bags will be donated to the Thatcham AT Expedition store. See report at Annex B.

### **CIVILIAN PROCUREMENT**

3. Many civilian equipment manufacturers were approached and most offered Trade or Expedition rates. Particularly favourable deals were struck with Mountain Equipment for sleeping bags and Lowe for 4 free rucksacks. Those items purchased through civilian sources are shown at Annex A.

### **EQUIPMENT TESTING**

4. Key equipment such as tents, cookers, radio and satcom were tested at the training meet at Ballachulish in Dec 96. This gave us the peace of mind that our equipment was sound and allowed sufficient time to rectify any minor problems.

### **PACKING AND TRANSIT TO NEPAL**

5. Stores were centralised and accounted for at Cdo Log Regt RM, Chivenor. Options for moving the freight to Nepal were limited as it became clear that RAF flights were not available. Commercial freight was also discounted due to prohibitive costs. Almost by default, therefore, was the decision made to ship the stores out by sea. The existing military supply route from the UK to the British Gurkhas Nepal (BGN) was utilised with their authority, organised by DTMX and charged to HQRM's UIN. All stores were packed into one 20 foot container which left Chivenor early in January, some 2 months prior to our departure for Nepal. The next time we saw it was in Kathmandu!

### **EQUIPMENT MANAGEMENT IN KATHMANDU**

6. It is 'highly irregular' for BGN to assist an adventure training expedition, however, an exception was made in our case which dramatically eased the passage of freight through Kathmandu. Normally, equipment is held up for days, possibly weeks in customs

bond. Exceptionally, we got our hands on our gear on the first day! What's more, because it was imported under the BGN licence, there was no import duty to pay.

7. While future expeditions should not rely on receiving the same treatment from BGN, their staff did express interest in establishing a permanent AT store in country. This would offer clear benefits to future expeditions, especially for communications equipment which is so difficult to import.

### **EQUIPMENT TRANSIT TO BC**

8. Expedition stores were broken down into 165 porter loads and BC stores and food (supplied by Summit Trekking) into a further 31 loads. Together, our 196 loads were transported by road to Basantapur, the nearest roadhead for the trek. Bob and Pea accompanied this freight 24 hours ahead of the main body.

9. After a bone shaking, 30 hour bus journey (overnight in Darhan) the main body arrived at Basantapur where we rejoined the equipment party. Over the previous few days the porter recruiting party had been busy but were still well short of the 196 total. When we finally set off the following morning, a significant quantity of stores were left in Basantapur until sufficient porters could be recruited. These were to follow on behind us.

10. This stage of any expedition can be frustrating. It is virtually impossible to keep track of all the stores because they soon become spread out as porters stop to eat and rest. The best advice, therefore, is to relax and let the Sirdar get on with it - that's what he's paid for. We accounted for key items each night (satcom, radios, optics, med box etc.) but little could be done to enhance security during the day. Not for a full week after our arrival at BC were we finally re-united with all of our equipment.

### **EQUIPMENT REPORTS**

11. Brief observations about the performance of our equipment are at Annex B.

### **Annexes:**

- A. Equipment Lists.
- B. Equipment Reports.

## BSGE EQUIPMENT LISTS

ANNEX A TO  
BSGE EQPT REPORT

SERIAL	ISSUE POINT	NSN	ITEM DESCRIPTION	QTY
<b>THATCHAM STORES</b>				
1	Thatcham	1.11129E+12	Pertex Mitts	14
2	Thatcham	8.41599E+12	Stockings Long (Red)	50
3	Thatcham	1.11E+12	Fleece Northcape	22
4	Thatcham	1.11129E+12	Mitts Dachstein	25
5	Thatcham	8.406E+12	Helmet Balaclava	25
6	Thatcham	1.11129E+12	Jkt Mtn Touring North Face	22
7	Thatcham	1.11129E+12	Sal Mtn Touring North Face	22
8	Thatcham	1.11129E+12	Rab Down Parka Jkt	9
9	Thatcham	1.11129E+12	Rab Down Salopettes	7
10	Thatcham	1.11129E+12	Rab Down Mitts	20
11	Thatcham	1.11129E+12	Rab Down Inner Tent Boot	22
12	Thatcham	1.11129E+12	Rab One Piece Windproof Suit	14
13	Thatcham	1.11129E+12	Pieps Avalanche Rescue Device	16
14	Thatcham	1.11129E+12	Leki Trekking Pole	10
15	Thatcham	1.11129E+12	Ladder Electron 25Ft	5
16	Thatcham	1.11129E+12	Himalayan Hotel Tent 3/4 Man	8
17	Thatcham	1.11129E+12	Tent Quasar High Alt 2 Man	12
18	Thatcham	1.11129E+12	Snow Saw	5
19	Thatcham	1.11129E+12	MSR XGK 11 Stove	7
20	Thatcham	1.11129E+12	MSR XGK 11 Fuel Bottle	7
21	Thatcham	1.11129E+12	MSR Cookset C/W Heat Exc	7
22	Thatcham	1.11129E+12	Stove EPI Gas Alpine	10
23	Thatcham	1.11129E+12	Helly Hanson Fibre Pile	14
24	Thatcham	1.11129E+12	Petzl Headtorch Double	15
25	Thatcham	1.11129E+12	Candles Lanterns	20
26	Thatcham	1.11129E+12	Candles	20
27	Thatcham	1.11129E+12	Snow Shovel Ortovox	10
28	Thatcham	1.11129E+12	Snow Goggles Glacier	21
29	Thatcham	1.11129E+12	Goggles Skiing Uvex	21
30	Thatcham	1.11129E+12	Altimeter 9000M	6
31	Thatcham	1.11129E+12	Mat Sleeping Thermarest	14
32	Thatcham	1.11129E+12	Mtn Mitts Extremities Modular	14
33	Thatcham	1.11129E+12	Rucksack Jaguar KS-100	12
34	Thatcham	1.11129E+12	Pile & Pertex Salopettes	6
35	Thatcham	No Number	Pole Set Himalayan Hotel	2
36	Thatcham	No Number	Pole Set Quasar	2
37	Thatcham	6.14E+12	Battery 24V Nicad 320	2
38	Thatcham	AT 1662	Sat Com Telephone	1
39	Thatcham		Solar Panel	1
40	Thatcham		Charge Unit	1
41	Thatcham	27 KC 2 1102811	Maxon Radio	4
42	Thatcham	1.11129E+12	Zestrotherm Hot Plate	25



**BSGE EQUIPMENT LISTS**

ANNEX A TO  
BSGE EQPT REPORT

<b>SERIAL</b>	<b>ISSUE POINT</b>	<b>NSN</b>	<b>ITEM DESCRIPTION</b>	<b>QTY</b>
<b>MOUNTAIN AND COLD WEATHER WARFARE STORES</b>				
1	M & CWW Store	A4 8465-99-770-4961	Karabiner Holk	200
2	M & CWW Store	LP 0471-99-616-0046	Piton Ice	30
3	M & CWW Store	LP 0471-99-619-0050	Screw Ice	100
4	M & CWW Store	LP 0471-99-601-0001	Piton angle	15
5	M & CWW Store	LP 0471-99-611-0039	Piton King Pin	15
6	M & CWW Store	LP 0471-99-618-0017	Rocks on Wire 1-10	30
7	M & CWW Store	LP 0471-99-401-0002	Climbing Axe 45	4
8	M & CWW Store	LP 0471-99-401-0004	Climbing Axe 45	3
9	M & CWW Store	LP 0471-99-408-0008	Ice Hammer	7
10	M & CWW Store	LP 0471-99-504-0005	Descender Figure 8	18
11	M & CWW Store	LP 0471-99-501-0002	Ascender Expedition	9
12	M & CWW Store	LP 0471-99-102-0008	Stove Alpine EPIGAS	6
13	M & CWW Store	A3 7360-99-135-7328	Cookset 3 Piece	6
14	M & CWW Store	A3 5120-99-135-8174	Shovel Short Aluminum	5
15	M & CWW Store	A3 5120-99-132-1205	Avalanche Probe	14
16	M & CWW Store	A318465-99-136-0620	Mat Sleeping	21
17	M & CWW Store	A3 7920-99-130-5784	Brush Snow	15
18	M & CWW Store	H6 6685-99-225-1261	Thermometers 6"	18
19	M & CWW Store	CM 8440-99-136-0634	Socks Arctic 1	50
21	M & CWW Store	CM 8440-99-130-7629	Wristlet	25
22	M & CWW Store	CM 8415-99-978-2182	Face Mask Arctic	25
23	M & CWW Store	CM 8465-99-708-8775	Goggle Snow	30
24	M & CWW Store	A3 8125-99-978-1788	Bottle Fuel Sigg	40
25	M & CWW Store	J2 7330-01-351-0221	Flask 1Ltr	9
26	M & CWW Store	J2 7330-01-978-9163	Flask 75CL	9
27	M & CWW Store	A3 8125-99-120-9470	Whistle	18
28	M & CWW Store	W106605-99-529-3731	Compass Silva	18
29	M & CWW Store	LP 0471-99-211-0010	Rope E/Weiss 8.5mm	10
30	M & CWW Store	LP 0471-99-320-0004	Tape Troll 10mm	200
31	M & CWW Store	LP 0471-99-320-0005	Tape Troll 15mm	200
32	M & CWW Store	LP 0471-99-511-0010	Karabiner Snap HISPO	50
33	M & CWW Store	LP 0471-99-511-0015	Karabiner Snap	50
34	M & CWW Store	J1 8340-99-132-4380	Pin 2 Man Alloy	200
35	M & CWW Store	J118340-99-132-1043	Pin 4 Man	100
36	M & CWW Store	V0408465-99-124-2828	Kit Bag Seaman	30
37	M & CWW Store	A31 8465-99-130-9983	Toe Strap	30
39	M & CWW Store	CM 8440-99-869-3660	Gaiters Yeti	4
40	M & CWW Store	A3 6660-99-138-1942	Case Windmeter	2
41	M & CWW Store	A3 6680-00-833-7010	Windmeter	2
42	M & CWW Store	LP 0471-99-919-0015	Pulley Troll	16
43	M & CWW Store	LP 0471-99-903-0001	Crampon 12 Point Grivel	18
44	M & CWW Store	CN 8465-99-973-6180	Cup Canteen	18
45	M & CWW Store	LP 0471-99-618-0023	Quadcams	24
46	M & CWW Store	A3 9110-99-453-0848	Paste Burning	144
47	M & CWW Store	LP 0471-99-401-0001	Walking Axe	7
48	M & CWW Store		Piton Ring	15
49	M & CWW Store		EPIGAS 250 CANISTERS+D203	300

**BSGE EQUIPMENT LISTS**

ANNEX A TO  
BSGE EQPT REPORT

SERIAL	ISSUE POINT	NSN	ITEM DESCRIPTION	QTY
<b>CDO LOG REGT RM STORES</b>				
1	Cdo Log Regt		Folding Table	2
2	Cdo Log Regt		Folding Chairs	6
3	Cdo Log Regt		Funnels	3
4	Cdo Log Regt		Torch Right Angle	20
5	Cdo Log Regt		Lamp Tilley	6
6	Cdo Log Regt		Arctic Sleeping Bag	25
7	Cdo Log Regt		Arctic Sleeping Bag Stuff S	25
8	Cdo Log Regt		Gortex Bivi Bag	25
9	Cdo Log Regt		Questar Telescope	1
10	Cdo Log Regt		Towel (Green)	21
11	Cdo Log Regt		Balaclava (Green)	21
12	Cdo Log Regt		Can Opener	21
13	Cdo Log Regt		Spare Poles 12 x 12	6
14	Cdo Log Regt		Padlocks	50
15	Cdo Log Regt		Millbank Bags	20
16	Cdo Log Regt		GS Pick	1
17	Cdo Log Regt		GS Shovel	1
18	Cdo Log Regt		Underwear (Green)	7
19	Cdo Log Regt		Quilted Suit	7
20	Cdo Log Regt		Mine Tape	5
21	Cdo Log Regt		Batteries LR6	2000
22	Cdo Log Regt		Batteries LR14	50
23	Cdo Log Regt		Batteries LR20	100
24	Cdo Log Regt		Gash Bags	200
25	Cdo Log Regt	8520-99-942-5921	Soap Bars Various	200
26	Cdo Log Regt		Plastic Buckets	21
27	Cdo Log Regt	5350-99-220-2687	Steel Wool	6
28	Cdo Log Regt	7290-99-220-2953	Scouring Pads	25
29	Cdo Log Regt		Tea Towel	25
30	Cdo Log Regt		Dish Cloth	25
31	Cdo Log Regt		Masking Tape	6
32	Cdo Log Regt	FI 8020-99-125-5010	2" Paint Brush	6
33	Cdo Log Regt	H-I 6505-99-225-2357	Talcum Powder	21
34	Cdo Log Regt	Steri Tabs	50	
35	Cdo Log Regt	A4 4020-99-120-3454	Para Cord	1
36	Cdo Log Regt	L11 6510-99-210-7563	First Field Dressing	50
37	Cdo Log Regt	HI 6260-99-224-4960	Candles	170
38	Cdo Log Regt	HI 6840-01-284-3982	Insect Repelant	50
39	Cdo Log Regt		Mantles	25
40	Cdo Log Regt		Pliers	1
41	Cdo Log Regt		Hammers	6
42	Cdo Log Regt		Hand Drill & Bits	1
43	Cdo Log Regt		Tape Measure	1
44	Cdo Log Regt		Hack Saw & Blades	1
45	Cdo Log Regt		Hand Saw	2
46	Cdo Log Regt		Allen Keys	1
47	Cdo Log Regt		Kim Wipes	48

## BSGE EQUIPMENT LISTS

ANNEX A TO  
BSGE EQPT REPORT

SERIAL	ISSUE POINT	NSN	ITEM DESCRIPTION	QTY
48	Cdo Log Regt		Toilet Roll	100
49	Cdo Log Regt	0350-120-8692	9mm X 220m Fixed Rope	5 drums
50	Cdo Log Regt		Stool GS	4
51	Cdo Log Regt		AMC Nicad Battery	4
52	Cdo Log Regt		Zarski Sacks (Survival)	2
53	Cdo Log Regt		Football	1
54	Cdo Log Regt		Lacon Bin A5	2
55	Cdo Log Regt		Lacon Bin10	1
56	Cdo Log Regt		Games	7
57	Cdo Log Regt			
58	Cdo Log Regt		Stove Alpine EPIGAS	3
59	Cdo Log Regt		Snow Stakes	30
60	Cdo Log Regt		Pear Link Karabiner	14
61	Cdo Log Regt		5mm Kernmantle	100m
<b>OTHER STORES</b>				
1	RNRMMC		Tent Quasar/Super Nova	4
2	RNRMMC		Ice Axe Mtn Tee	3
3	RNRMMC		Snow Stakes	5
4	RNRMMC		Water Purifier	1
5	RNRMMC		Yaesu Radios	3
1	CTCRM Video Unit		Sony DCS 10 Charger	1
2	CTCRM Video Unit		Sony ACN55 Charger	1
3	CTCRM Video Unit		Solar Panel (Siemens)	1
4	CTCRM Video Unit		Bowens Tripod	1
5	CTCRM Video Unit		Sony Cigarette Adaptor Plug	1
6	CTCRM Video Unit		Video Recorder	2
1	PSION		Psion series 3A & ancils	4
1	Exped Purchase		Barrels 60 Ltr	42
2	Exped Purchase		Barrels 30 Ltr	28
3	Exped Purchase	Nuffield Trust	Sleeping Bags ME Everest	14
4	Exped Purchase		Marlow 6mm Rope	300m
5	Exped Purchase		Gemini Tent	2
6	Exped Purchase		Games	
7	Exped Purchase		Mugs	13
8	Exped Purchase		Psion Flashcard	1
9	Exped Purchase		Rucksacks	4
10	Exped Purchase	Exped rig	ME Trousers	14
11	Exped Purchase	Exped rig	Polo Shirt	14
1	GASHERBRUM		RAB Down one piece suit	19
2	GASHERBRUM		BERGHAUS one piece windsuit	9
3	GASHERBRUM		BERGRAUS Fleece salopette	10
4	GASHERBRUM		Polartec Windbloc jacket	7
5	GASHERBRUM		Polartec Windbloc salopette	11
6	GASHERBRUM		RAB Down duvet jacket	9
7	GASHERBRUM		RAB Down tent boots	22
8	GASHERBRUM		RAB Down mitts	11
9	GASHERBRUM		RAB Down sleeping bags	6
10	GASHERBRUM		RAB Down sleeping bag	2
11	GASHERBRUM		Down sleeping bag	1
12	GASHERBRUM		Neoprene Gaiters	9
13	GASHERBRUM		Collapsible Oven	1



**ANNEX B  
EQUIPMENT REPORTS**

**NORTH FACE HIMALAYAN HOTEL TENT**

**Description:** As the name implies, a spacious, well constructed BC tent.

**Source:** Thatcham

**Use:** Extensively at BC and ABC and during the trek in and out.

**Conditions:** BC and ABC were both high altitude camps, above 5140m. The tents were subject to extreme variations in conditions from +25C to -25C on a daily basis. Additionally, snow, wind and UV were not in short supply.

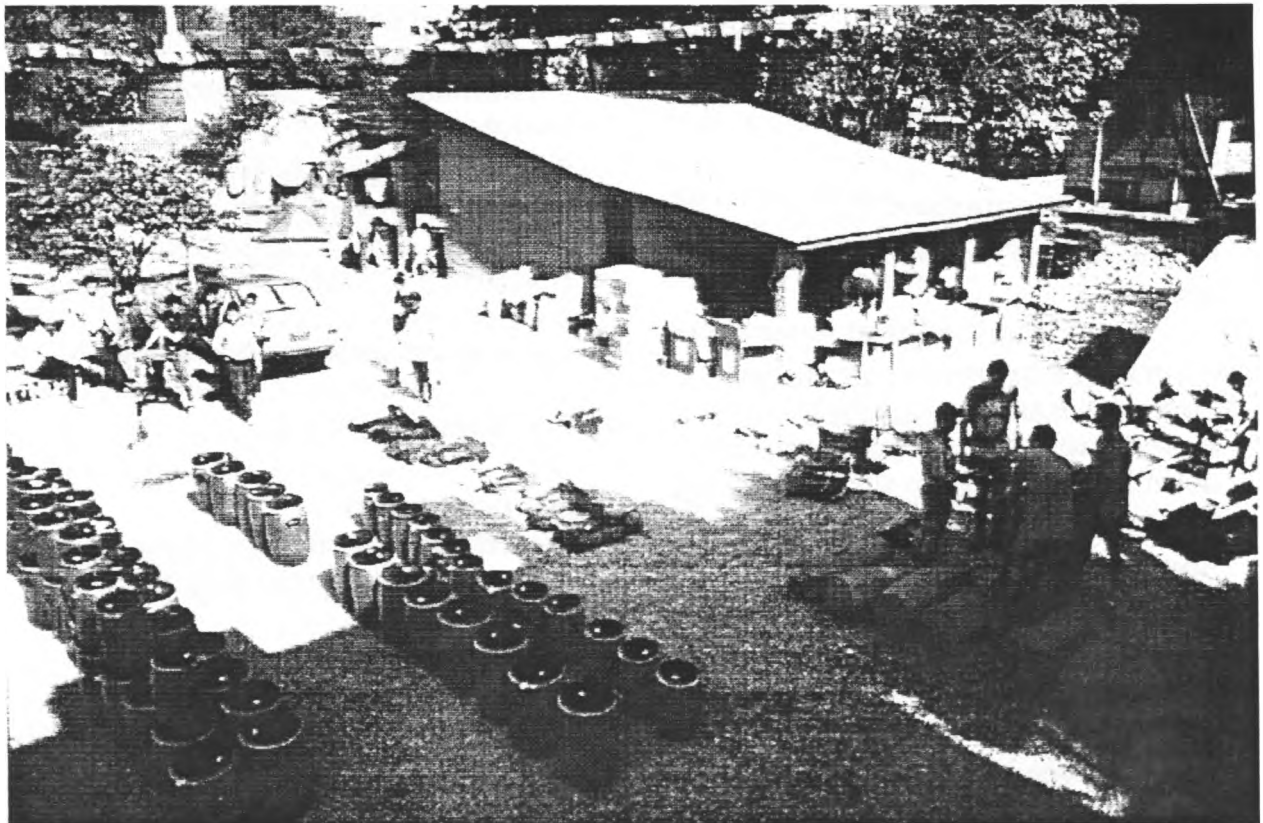
**Performance:** Generally excellent.

**Positive aspects:** The tents survived extremely bad storm conditions and high winds without mishap. They were also

robust enough to withstand some pretty heavy use, without failure. There were rarely more than 3 climbers per tent which gave them a luxurious feel - exactly what is required of BC / ABC tentage, especially after a hard spell on the hill. Colour coordinated poles made these large tents particularly easy to erect.

**Negative aspects:** The tent would be improved by having a double bell of greater capacity, rather than the present single bell and flat entry. The bell was occasionally prone to collapse and a more rigid construction would be an improvement.

**Recommendations:** Highly recommended for expedition use.



Preparing stores for the approach march at Summit Trekking

### **GEMINI GORETEX TENT**

**Description:** A single skin Goretex, lightweight assault tent.

**Source:** Expedition purchase

**Use:** High camps (3 and 4).

**Performance:** Largely dependent on the inhabitant's dimensions. Two dwarfs can fit at a pinch. Very cramped but easy to pitch, light to carry and stood up to very high winds extremely well.

**Points to note:** As with all Goretex tents in cold temperatures, the fabric freezes and frost develops on the interior. The use of a candle lessens this effect and allows the fabric to breathe, preventing possible suffocation. Despite its coffin-like interior, it does its job perfectly as a bivouac tent.

**Possible improvements:** A lightweight bell end is a must for bad weather.

**Recommendations:** For use only at the highest camps.

### **QUASAR TENTS**

**Description:** Lightweight 2 man mountain tent with fly sheet.

**Source:** Thatcham

**Use:** ABC, Intermediate, C2

**Performance:** Excellent. Strong, light and robust.

### **MOUNTAIN EQUIPMENT EVEREST SLEEPING BAGS.**

**Description:** A full weight, pure duck down bag with a nylon shell and Pertex inner and a full length zip.

**Source:** From Mountain Equipment purchased with Nuffield Trust minor grant. Returned to Thatcham on return.

**Used:** BC and above. (Lightweight bags were used during the trek)

**Performance:** A first class HA bag with a luxurious feel.

**Points to note:** Extra large sizes are available. Gore-tex bivouac bags were used above BC and were considered to be better than a Gore-tex shell on the bag.

**Recommendations:** The ultimate bag!

### **NORTH FACE GORETEX JACKET & SALOPETTES**

**Description:** Both garments have a heavy duty Goretex outer and a polyester inner.

**Source:** Thatcham

**Used:** Used regularly by some members for load carrying along the glacier, climbing fixed ropes and lead climbing. Used by all members during the trek out in heavy rains.

**Performance:** Excellent, particularly during extreme conditions.

**Points to note:** The underarm vents of the jacket have a zip and velcro fastening. However the velcro tends to close of its own accord when walking along preventing adequate ventilation. The comfort flap of the salopettes was very useful.

**Recommendations:** The combination of jacket and salopettes offer excellent protection against extreme elements. However, it is a heavier combination than the pertex wind suits and is a matter of personal choice which is worn. It is, however, nice to have that choice. Overall; highly recommended.

### **RAB DOWN SUIT**

**Description:** A one piece down suit with a Pertex shell for extreme cold weather use.

**Source:** Thatcham.

**Use:** Around BC early on! Above C3 it was used to climb in. At C4 it was used instead of a sleeping bag to save weight.

**Performance:** Good, a dependably warm garment. A real life saver in the upper reaches.

**Points To Note:** The extended leg zips are not as convenient to use for relief as an extended crotch zip however, this is a useful ventilation device.

**Possible Improvements:** The velcro on this suit is a disaster! It would be better if the outside flaps were replaced with interior baffles. It is difficult to cope with pop studs or velcro wearing gloves.

**Recommendations:** The velcro needs to be stitched onto the fabric before re-issue.

### RAB WIND SUIT

**Description:** Lightweight Pertex one-piece wind suit.

**Source:** Thatcham

**Use:** Everywhere from Lonak to the summit by all members.

**Performance:** A excellent wind shell but not an insulation garment.

**Points to note:** The velcro on the leg zips is hideously strong and makes putting the suit on a real pain and adds to the stiffness of the legs. The main zip on some suits failed but, due to the super strength of the velcro, this did not render the suit unusable.

**Possible Improvements:** Sort the velcro out.

**Recommendations:** A well designed, lightweight, windproof suit.

### RAB DOWN PARKA

**Description:** Pertex down parka with hood.

**Source:** Thatcham

**Use:** Used at base camp by most members and by one summitteer.

**Performance:** Generally considered to be

an excellent piece of equipment by all who used it.

**Points to note:** Rab zippers are difficult and at times unworkable; especially when using mitts and gloves. The hood was notably too big, even when used in conjunction with a helmet. Finally, the cut of the parka was considered too full.

**Possible improvements:** A less roomy cut in the parkas design. The hood could be cut down in size. A more user friendly zip system should be used; especially for mitt and glove use.

**Recommendations:** None

### RAB DOWN SALOPETTES

**Description:** Pertex Down Salopettes

**Source:** Thatcham

**Use:** Limited - occasional at base camp and by 2 summitteers. (in conjunction with the Rab Parka)

**Performance:** Although it received limited use, it was highly rated by its users.

**Points to note:** The zip system was not user friendly and proved difficult with mitts and gloves.

**Possible improvements:** A more user friendly zip system.

**Recommendations:** None.

### BERGHAUS WIND-SUIT

**Source:** Gasherbrum

**Description:** A one piece cotton windproof suit. There is one zip down the front which allows easy donning of the garment. The zip design allows the upper body section to be stowed away whilst still utilising the leg protection.

**Points to note:** The suit needs a double zip to 'ease easing', especially when wearing a harness. A snugger fit around the waist would be an improvement.



**Recommendations:** A superb windsuit, if a little baggy when used without full down underneath. Heavier than the Pertex suits.

### **BERGHAUS WINDNBLOC 7000 JACKET AND SALOPETTES**

**Description:** Windproof fleece suit

**Source:** Gasherbrum expedition

**Use:** Climbing wear generally above ABC

**Performance:** Excellent design & fit made in high quality material. Quite bulky.

### **EXTREMITIES MOUNTAIN MITTS**

**Description:** A double mitt with a thick pile inner and a shaped Goretex outer for very cold temperatures.

**Source:** Thatcham special purchase.

**Use:** On upper parts of mountain and abseiling down fixed lines

**Performance:** Efficient, if a little bulky. Too warm at lower altitudes. Robust during abseiling.

**Recommendations:** Correct sizing is important.

### **ASOLO AFS EXPEDITION BOOT**

**Description:** High altitude, light weight plastic mountaineering boot.

**Source:** Individual purchase through Asolo agent.

**Use:** Used by 50% of the team for all movement above ABC.

**Performance:** A warm and comfortable boot ruined by shoddy workmanship.

**Points to note:** Several boots rapidly fell apart and the inner boots soon wore-out. Eyelets on the outer shell broke off and the plastic at the back tore easily. These were serious defects to one of the most important items of individual equipment.

**Possible improvements:** A much more robust manufacture is needed.

**Recommendations:** A high quality boot but poorly manufactured and not recommended for future use until the problems are sorted. The older models were excellent and well made.

### **SCARPA VEGAS - HA BOOTS**

**General:** Similar to the Asolo but without the quality control problems. Yeti gaiters and crampons fitted extremely well.

**Points to note:** The boots are sized on the large size. Take care when ordering! Some found a fair amount of heel slippage during front pointing.

Four members of the team had the Vegas but only 2 used the high altitude inner boots. There were no real problems with cold feet.

### **THERMAREST (Luxury model)**

**Description:** A full length, full thickness, inflatable sleeping mattress complete with carrying case and puncture repair kit.

**Source:** Thatcham. Special purchase.

**Use:** Sleeping and used extensively during the trek and on the mountain.

**Performance:** Outstanding.

**Points to note:** Uncomfortable if over-inflated. Requires careful handling to avoid punctures.

**Possible Improvements:** Nil.

**Recommendations:** A must at every level from trekking to the top camp. The luxury model is significantly more comfortable than the standard model, especially after 9 weeks in the field!

### **FIXED ROPES**

Fixed ropes were used extensively on the lower part of Gimmigela, especially between ABC and C2 which was extremely steep and completely fixed. Above C2 only the steepest sections were fixed. The main fixing rope was a

9mm x 220m braided static Marlow rope. (NSN 0350-120-8692) This had been successfully used on previous expeditions, however, on Gimmigela where the ropes were subject to very heavy use and constant freeze / thaw, they suffered limitations. The braid eventually slipped causing the bottom of the rope to thicken and then freeze. Early in the morning these ropes were like wire hawsers and difficult to descend.

In Kathmandu we were concerned that we did not have enough fixed rope and purchased extra 9mm polypropylene line. This was used on the more gentle slopes and was reasonably hard wearing. Higher up, a lighter and thinner rope was used. We took 7mm but 6 would suffice and be even lighter. This was a Marlow kernmantle rope and worked well.

Ropes were fixed on very steep ground where the consequences of a break or cut would have been extremely serious. Much time was therefore spent maintaining, replacing and improving the line. On particularly steep sections a climbing rope was fixed as a back up abseil rope. After the climb we went to considerable efforts to strip the mountain. Only one short section of rope was left below the 'Ice Monster'. It is recommended that 9mm 'Black Marlow' or similar be used in the future as the main line, with lighter rope for use higher up. In total, approximately 1500m of rope was fixed.

#### **LEKI MAKALU SKI POLE**

**Description:** Three section trekking pole

**Source:** Thatcham

**Use:** Used extensively during the trek & from BC to ABC.

**Performance:** Overall excellent. Very valuable in down hill sections.

**Points to note:** Using 2 is much better than one. The snow baskets were necessary on the glacier. All breakages were in the lower section.

**Recommendations:** Make lower section stronger.

#### **PSION 3A PALMTOPS.**

**General:** We took 4 Series 3As to Gimmigela (on loan from Psion) and they were split amongst expedition members with responsibility for food, logistics, finance and the historical diary. Procurement of the 3As before we departed for Nepal gave a degree of continuity and taught us how to make best use them. They were of particular use in the following areas:

**Finances:** With current, credit, debit, cash and travellers cheque accounts in 3 different currencies, the expedition account had the potential to become a bit of a nightmare. On the mountain, all transactions were in cash (Rupees) and completed on the move and in all weather conditions. It was therefore extremely useful to have a mobile finance software package. We were able to keep track of expenditure and not lose sight of the bigger picture.

**Equipment Tracking:** With 3 tons of equipment and thousands of individual items, all of which had to be accounted for, the base camp manager was faced with a formidable problem. Records of individual issues to members and loads carried by 196 porters were kept, giving us visibility of all stores. The Psions could not, however, prevent porter strikes and complications resulting in our kit being spread out for miles and separated by up to 3 days! Without the Psions, however, we would have had great difficulty tracking and accounting for stores. When things became particularly fraught, this would have been preferable - ignorance is bliss!

**Logistics on the hill.** On a climb using traditional Himalayan tactics, i.e. fixed ropes and tented camps, logistics is a vital function. The combination of the radios and Psions allowed us to plan ahead and track most stores items. Critical items included food, fuel and climbing equipment; spreadsheets showing current stock levels of each camp quickly identified areas of deficiency. These were discussed on the evening radio schedule and formed the basis of the following day's load carrying programme. All data was backed up to Solid State Disks which were carried between camps to update other Psions.

**Expedition Diary.** The expedition diary, and many individual diaries, were kept on Psions. Over the months, this amounted to a considerable amount of data. On our return home, it was a simple matter to download the files onto a PC for final editing and printing.

**Satcom phone log.** The telephone log was kept on a spreadsheet showing duration and cost of calls. This was compared to the itemised satcom bill on our return to the UK. Happily, both documents closely resembled each other!

**Games.** Much time was spent tent bound during storms. When the books had been read, the Psion card games were a great favourite - unless you didn't have one! Marty Hallett claimed the record for Patience.

**Summary.** The one area of disappointment was our inability to connect the Psions to the satcom. Try as we did, success always eluded us in this area. The Psion fax was incompatible with the satcom. It had been our intention to fax sitreps directly to the UK from the Psion, on which they were drafted. In the event, sitreps were passed by voice.

It should be clear by now that we relied heavily on these small machines and could not afford to lose them. The base camp manager, almost on a daily basis, caused great alarm by losing his Psion. Luckily, he always found it. Towards the end I am convinced he did it on purpose!

The Psions were light, simple to use and very user friendly. A major advantage was their power source - pussers' AA batteries! Depending on use, battery life was about 2 weeks. Our greatest fear was their susceptibility to the cold, especially in the higher camps. This was unfounded and, as long as simple precautions were followed, none were damaged by the cold, even at camp 2 at 6300m. On a final note, the Psions were a great source of amusement to the kids during the march in and out. On the mountain they also amused the 14 kids who were doing the climbing.

#### **QUESTAR TELESCOPE**

**Description:** An extremely powerful photographic surveillance lens.

**Source:** RM Poole.

**Use:** At BC for mountain spotting.

**Performance:** An excellent clear image which, unfortunately, was reversed unless a camera was attached. The scope was so powerful it was difficult to locate the subject matter. Very expensive and requires insuring. At the time of writing, the photographs taken with it have not been developed.

**Recommendations:** A less sophisticated less powerful scope would suffice. X 20 mag is recommended.



# CHAPTER 4 - FOOD REPORT

## INTRODUCTION

1. Planning for the feeding policy began in the Autumn of 1995 when it was decided that service operational ration packs, (ORP) 10 man and 24 hour Arctic, would provide the foundation of the diet at BC and above. Early contact was made with the Department of Service Food Management (DSFM), at Ensleigh, Bath. Sections SFM 31 and 33 are responsible for the production, development and consignment of ORP world-wide. The advice and assistance provided by Majors Sam Slade RLC and David Martin RLC was invaluable. With their help and experience, the menus for the high altitude (HA) rations were quickly put together, and authority granted to purchase the non-service items.

2. After consultation with the Team Leader it was decided the total requirement in man days was as follows:

**HA rations.** 400 man days based on the 24 hr arctic freeze dried and boil in the bag rations.

**BC rations.** 400 man days of 10 man compo with arctic supplement (25% daily rate of CILOR). Additionally, bulk supplement enhanced the basic rations and provided variety.

**Route in/out and time in KTM.** Cash in lieu of rations (CILOR), 538 man days.

## PROCUREMENT

3. The ORP Production and Storage Facility (PM(ORP)PROC) at NB Portsmouth was requested to provide the expedition's requirement of ORP. In addition to consigning 400 man days each of 10 man and 24 hr arctic to BRIGNEPAL, greatly reducing the expedition's shipping costs, they provided the individual ORP items that would eventually form the HA menus. A breakdown of HA menus is at Annex A. To enhance the 10 man rations at BC, the expedition purchased some bulk supplement and was donated further supplies by CPC (United Kingdom), Caterplan Division. A list of bulk supplies is at Annex B.

4. CILOR was claimed in accordance with BR5 (Naval Catering Manual) for the period spent in Kathmandu and on the trek in/out. Additionally, to boost the calorific value of the 10-man rations, every day spent at BC, provided it was above the snowline, attracted the payment of arctic supplement at 25% of the daily rate of CILOR. A breakdown of the ration account is at Annex C.

## COMMENTS AND SUGGESTIONS

5. The expedition was provided with excellent support throughout. In-service rations are eminently suitable for the foundation of HA rations, they do however, have some limitations at altitude where the loss of appetite is a common occurrence. The team was canvassed at an early stage as to likes and dislikes. This is important to minimise complaints - it also saves the food member from endless flack! Well, almost.

6. The main factors in the selection of the contents of the HA packs were nutritional value, weight and producing appetising food which would appeal at altitude. The end result was the creation of 4 menus, with 2 based around the boil-in-the-bag GS individual 24hr retort pouch, and 2 based on the recently introduced freeze dried 24hr Arctic ration. The main comments on the HA and BC rations were:

**Freeze Dried Main Meals.** These were light and had good nutritional to weight values. They require to be soaked for some time to make them palatable and can be prepared in the retort pouch or emptied into a pot-mess. The meat is not Soya substitute and provides a good base for meals. However, the minced beef menu became increasingly unattractive as appetites waned. Above ABC, it was decided to use freeze dried only to save weight. Inevitably, this is a matter of personal preference but in retrospect, for convenience and taste, the boil in the bag menus should also be considered despite their weight. With

one notable exception, all appetites were inhibited above C2.

**Boil In The Bag Meals.** These have a poorer nutritional to weight ratio but are however, convenient to use and provide a complete meal in one pouch. They were used mainly at ABC and to enhance the main meals at BC later in the trip. On reflection they would have been more appropriate at the higher camps since they are more appetising and convenient to use. The water used to heat them can subsequently be used for drinks and so save on fuel with an associated saving in weight.

**Snack Meals.** The intention of the snack meal was to provide a variety of chocolate and light foods to allow individuals to 'graze' throughout the day. To some extent this worked but the choice of contents could have been less to reduce weight and rubbish. In each pack there should be one choice of chocolate bar, biscuits and cheese - later in the trip these were taken out at BC because it was believed they were not being eaten. The dried fruit was not a success - it had an immediate and adverse effect on the stomach! The Peperami meat sticks were popular and high in nutritional fats; more flavours would have been a significant improvement though.

**Drinks Pack.** The contents of the drinks packs were greatly enhanced by a 40g sachet of High Five isotonic sports drink in a variety of flavours. These were very popular and equally suitable for water bottles or drinking hot. They are, however, high in carbohydrates and some members complained of stomach problems. Generally, there was too much weight and gash in the wets pack as time in Kathmandu was short and did not allow the team to effectively reduce the contents. The main comments were:

Increase the number of isotonic drink sachets, alternatively retain the fruit powder drink.

Reduce the number of sugar sachets.

Provide powdered milk.

The improved soups were very popular as were the Oxo cubes. These were used individually or to enhance the flavours of the main meals.

**Savoury Rice.** The addition of savoury rice was a last minute and highly successful stroke of luck due to the unavailability of the in-service easy cook rice. These provided the main meals with bulk and flavour, although even these were rejected as appetites were lost.

**Condiments.** The choice of condiments was generally well received however, an increase in the amount of Worcester sauce would have been a popular move. Additionally, providing curry paste/powder and chilli sauce would have added greater flavour to both the HA and BC rations.

**Bread and Pizza.** The biggest disappointment to all was the lack of fresh bread and pizzas. Although bread and pizza mix was provided, the Nepali staff were unable to produce any worthwhile results. The mixes were used instead to make chapatis which was fine but occasionally, baking fresh bread would have made the difference.

**Packaging.** The 10 man ration boxes were superb. They stood up to the battering of two weeks on the backs of porters and yaks and, when empty, made excellent shelving! The HA rations were split down and placed in medium sized polythene meat bags, these were then repackaged into the large primary packaging. This worked well to an extent but could have been improved by reducing the contents of each ration and putting two man days into each bag. The boxes themselves were not as robust as the 10 man boxes and showed signs of wear and tear after a short time. Many of the BC rations were transported in seaman's kit bags. As a result damage and loss to some items occurred. A complete load of food was also lost when a yak was killed crossing a scree slope.

## COOKING POLICY

7. We used 3 separate methods of cooking on the expedition:

**Base Camp.** Centrally prepared meals by the permanent BC staff. After some instruction, Shamsir Tamang and Dawa Sherpa, his able cook boy, were able to produce high quality meals from compo and the various supplements. A small yak herder's hut was used as a kitchen where all meals were prepared on kerosene cookers provided by Summit Trekking.

**ABC.** Individually prepared meals using MSR 'XGK' cookers on Kerro.

**Above ABC.** Individually prepared meals using propane butane gas cookers, the lightest and simplest cookers available.

## RECOMMENDATIONS

8. The main recommendations are:  
Provide a greater choice of freeze dried ration.

The boil in the bag ration is a versatile and appetising meal that should be considered for use high on the mountain despite its weight.

Reduce the weight of the snack and drinks packs.

Vary the Peperami meat sticks to provide a greater range of flavours.

Increase the number of isotonic/fruit flavoured drinks. Provide greater variety of hot drinks and reduce the amount of sugar sachets to save weight.

Increase the amount of condiments and provide curry powder and chilli for flavour.

Allow more time in the programme to break down rations and ditch gash before embarking.

Pack the HA rations in 2 man / day bags for ease of transporting and accounting.

Ensure all the food is packed in waterproof, solid containers to reduce damage.

## SUMMARY

9. Rations are a vital part of any expedition. Get it wrong and not only will the team's performance on the hill be affected but, so will its morale. It is prudent, therefore, to canvas members' likes and dislikes before departure. The expedition generally fed well and, apart from the comments and suggestions made above, the team's opinion is that the feeding policy was about right. The main point to remember is be imaginative, particularly in choosing the contents for the HA rations. Having both boil in the bag and freeze dried meals to choose between was deemed to be a good move. Inevitably, appetites and tastes will deteriorate, so flavour is vital if the rations are to remain palatable at the higher camps. It is also important to get the quantities right; taking too much will hike the portage costs, less serious, however, than taking too little.

10. The dual fuel policy worked well. Kerro (paraffin) was used to save on gas and is readily available in Kathmandu. Cooking on kerro with XGKs at ABC was unpopular with some members, however, it is a perfectly viable option. Avtur (aviation kerro) was used as it is cleaner. As it happened, we over-estimated the amount of gas required and could have used gas at ABC.

11. Finally, we are greatly indebted to the staff of PM(ORP)PROC, HMNB, Portsmouth and DSFM whose help was invaluable. Early contact with these organisations is important in order to seek their help in procuring in-service and commercial items, seeking guidance on new developments in ORP and the payment of CILOR and other supplements. Their assistance was invaluable.

Annexes:

- A. High Altitude Rations - Menus.
- B. Base Camp Rations - Supplements.
- C. Food Account.



**ANNEX A  
HIGH ALTITUDE RATION (HAR) MENUS**

	<b>Menu A</b> (Boil in bag)	<b>Menu B</b> (Freeze dried)	<b>Menu C</b> (Boil in bag)	<b>Menu D</b> (Freeze dried)
<b>Breakfast</b>	Corned Beef Hash Apple & Apricot Flakes Chocolate Drink Oatmeal Block (2)	Instant Oat Cereal Apple Flakes Chocolate Drink Oatmeal Block (2)	Sausage and Beans Apple & Apricot Flakes Chocolate Drink Oatmeal Block (2)	Instant Oat Cereal Apple Flakes Chocolate Drink Oatmeal Block (2)
<b>Snack</b>	Snickers Pepperoni Mixed nuts Fruit Biscuit Dried Tropical Fruit Mix Brown Biscuits Cheese Spread Choc Tracker Bar	Topic Pepperoni Mixed Nuts Fruit Biscuits Dried Tropical Fruit Mix Brown Biscuits Cheese Spread Choc Tracker Bar	Snickers Pepperoni Mixed Nuts Fruit Biscuit Dried Tropical Fruit Mix Brown Biscuits Cheese Spread Choc Tracker Bar	Topic Pepperoni Mixed Nuts Fruit Biscuits Dried Tropical Fruit Mix Brown Biscuits Cheese Spread Choc Tracker Bar
<b>Main Meal</b>	Instant Soup Lamb Stew & Potatoes Rice	Instant Soup Lamb & Green Peas (2) Rice	Instant Soup Chicken Mushrooms & Pasta Rice	Instant Soup Savoury Mince (2) Rice
<b>Sundries</b> (All Menus)	Boiled Sweets Instant Coffee (2)	Sugar(8) Beverage Whitener (6)	Oxo Cube (3) Kendal Mint Cake	Instant Tea(4) High Five Energy Source
<b>Total Wt</b> <b>Total Cals</b>	2.129 Kg 5953 kcal	1.764 Kg 6545 kcal	2.129 Kg 5953 kcal	1.764 Kg 6545 kcal

**HIGH ALTITUDE RATIONS CONTENTS PROCUREMENT**

<b>ITEM</b>	<b>QUANTITY</b>	<b>REMARKS</b>
Primula cheese spread 75g	500	Supplied by PM(ORP)PROC.
Chicken mushroom & pasta 300g	125	Supplied by PM(ORP)PROC.
Lamb stew and potato 300 g	125	Supplied by PM(ORP)PROC.
Corned beef hash 300g	125	Supplied by PM(ORP)PROC.
Pork sausage and beans 300g	125	Supplied by PM(ORP)PROC.
Savoury rice (Assorted)	400	Commercially purchased by PM(ORP)PROC
Peperami sticks	520	Supplied by PM(ORP)PROC.
Dried fruit salad	127	Delivered by NAAFI in incorrect D of Q
Sugar sachet 25g	1500	Supplied by PM(ORP)PROC.
Tracker choc chip meusli bar	500	Procured through NAAFI.
Topic bar	288	Procured through NAAFI.
Snickers bar	240	Procured through NAAFI.
Non dairy whitener 6g	2000	Supplied by PM(ORP)PROC.
Chewing gum	500	Supplied by PM(ORP)PROC.
Instant coffee sachet 5g	500	Supplied by PM(ORP)PROC.
Kendal mint cake plain	250	Supplied by PM(ORP)PROC.
Polythene bags 240 x 200	250	Intended to repackage rations but found to be too small.
Oxo cubes	150	Procured through NAAFI. 100 beef and 50 chicken.
Oatmeal blocks 25g	1000	Supplied by PM(ORP)PROC.
Mixed nuts and raisons	504	Procured through NAAFI.
Isotonic Drink Sachet 40g	400	Commercially purchased.
Matches (Book)	500	Supplied by PM(ORP)PROC.

**ANNEX B  
BASE CAMP RATIONS - ENHANCEMENTS TO 10-MAN RATION PACKS**

ITEM	QUANTITY	REMARKS
Biscuit Assorted 100's	4	
Bread Mix 3.5 Kg	8	
Camembert Tinned		
Brie Tinned 125g	12	
Snickers Bars 62g x 48	4	
Chocolate Spread 350g	11	
Custard Powder 3.5Kg	4	
Egg Noodles 250g	24	
Fruit & Fibre 375g	12	
Honey 454g	6	
Assorted Jam 20g x 100	3 Boxes	
Luncheon Meat 300g	24	
Mackerel in Tomato Sauce	20	
Milk Powder 2Kg	12	
Mixed Herbs 25g	7	
Meusli 750g	12	
English Mustard 100g	4	
French Mustard 90g	4	
Pasta Shells 500g	12	
Pasta Twists 500g	12	
Peanut Butter crunchy 340g	11	
Pepper ground 500g	2	
Pizza Mix 3.5 Kg	4	
Ryvitta 200g	24	
Salt 750g	12	
HP Sauce 255g	6	
Tomato Sauce 567g	4	
Worcester Sauce	6	
Sugar 1Kg	10	
Teabags 160	8	
Tomato Puree	8	

**ANNEX C  
FOOD ACCOUNT**

Serial	Item	Quantity/Cost /Man-days	Remarks
(a)	(b)	(c)	(d)
01	24 Hr ration packs	400 man days	Consigned to BRIGNEPAL
02	10-man ration packs	400 man days	Consigned to BRIGNEPAL
03	HA supplement items		Supplied by PM(ORP)PROC See Appendix 1
04	Commercial items charged against IAC 1G2 1121	£1136.37	ACW/GIM/001 dated 3 Dec 96 refers
05	BC bulk supplement	£412.22	NAAFI catering contract. Paid by expedition.
06	CILOR claimed against IAC 1G2 2200	£1646.28	538 man days @ £3.06 (241.54 Nepalese Rupees plus 20% per day)
07	Actual man-days on CILOR	550	Expedition in credit by 12 x £3.06 = £36.72
08	Arctic Supplement claimed against IAC 1G2 2200	£192.00	300 days @ £0.64p
09	Actual man-days on Arctic supplement	280	Exped in debit by 20x 64p = £12.80. 12 boxes of 10-man left in Nepal
10	Balance of Ser 09 & 10	£23.92CR	
11	Number of HA rations consumed	308	Approx 20 man-days lost to rodent and bird damage.

# CHAPTER 5 - COMMUNICATIONS REPORT

## **'TACTICAL' COMMUNICATIONS.**

1. The successful outcome of the expedition must, in part, be attributed to the excellent communications we enjoyed on the hill. Regular schedules occurred twice daily but, more often than not, BC would maintain a listening watch. The evening call would often last for 30 minutes or more, with each camp on air. This 'round the table' conference call was extremely valuable to monitor logistics, gauge progress of the climb and the welfare of members and it greatly eased the decision making process. It also boosted morale and allowed individuals to voice their opinions - some more than others!

2. The 5 VHF radios used on the hill were light, reliable, and, equally importantly, used puffers AA batteries. For technical details, see Annex A. We also took 4 Maxon VHF radios from Thatcham. Unfortunately, being US spec, these were incompatible and less reliable than the others and rarely used.

## **REAR LINK COMMUNICATIONS**

3. An inmarsat telephone from the AT Store at Thatcham was used to provide the rear link. In the UK, there was much discussion about the necessity of a rear link at all. However, with the sets available today, it is almost inconceivable for an expedition of this nature not to have one. The only problem is expense. See below.

4. Until just a few years ago, there was little practical assistance that a satcom could summon in Nepal. However, there are helicopters available in Kathmandu today which can deposit loads and evacuate casualties from heights in excess of 20,000 ft. While this may detract from the feeling of isolation one seeks in the mountains, it is nice to know it is there! Our satcom was used to call for a helicopter to rescue an injured climber from another expedition who fell on the North face of Kanchenjunga. Happily he made a full recovery.

5. The primary justification for the satcom was to receive the formatted weather reports from CinCFleet on a daily basis. Its most spectacular success, however, was to enable the First Sea Lord, our patron, to speak live to Pea Peacock on the summit. Similarly, Brigadier David Nicholls, RNRMMC President, spoke to the second summit team 2 days later. Subsequently, we conducted live radio interviews with local and national radio stations back in the UK.

## **POWER SOURCES**

6. Battery re-charging for the satcom was by means of small solar panel sets which were used to charge nicad PRC 320 batteries. It took 6 hrs to fully charge one battery. Re-charging the hand held sets away from base camp is impractical and was not considered. A large supply of AA batteries was taken instead.

## **COMMUNICATIONS IN NEPAL**

7. The Nepalese authorities are acutely sensitive about the use of any radios by foreigners in Nepal. Consequently, communications equipment attracts an exorbitant import deposit (refundable) and royalty (non-refundable). Together this cost just under £4,000. The equipment may not be used without a licence from the Ministry of Communications. To prepare this licence, full details (frequencies and serial numbers etc.) are required months in advance. Summit Trekking once again prepared the way for us and no problems were encountered.

8. Individuals were charged for personal calls which helped reduce costs. At the standard rate, our calls were charged at just under \$5 per minute. The total bill was £1080. For expeditions considering the use of satcom in the future, the call costs should not be over-looked. Details of the satcom and radios are at Annex A. In retrospect, the satcom was considered to be a great success, and worth the cost. Internet web sites should be considered in the future to keep sponsors and interested parties in the picture.

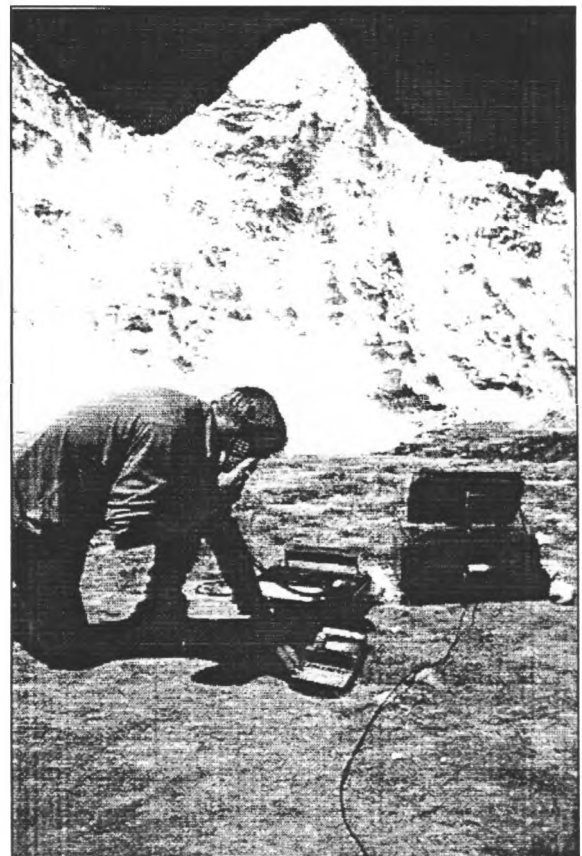


## ANNEX A TECHNICAL DESCRIPTION OF EXPEDITION RADIOS

<b>Make:</b>	3 x YAESU FT23 R - supplied by the RNRMMC. 2 x ICOM HAND HELD UHF RADIOS - on loan from Himalayan Kingdoms.
<b>Weight:</b>	0.43 kg
<b>Frequency:</b>	144 - 147.995 Mhz in 5 Khz steps
<b>Current consumption:</b>	19 ma on standby, 150 ma on receive, 1500 ma tx (5 w) 900 ma tx (2 w)
<b>Audio output:</b>	0.4 watts (optional headsets)
<b>Power output:</b>	5 watts at 12 v dc, 2.5 watts at 7.2 v, 2 watts at 6.9 v (dry cell batts)
<b>Durability:</b>	Weatherproof with rubber seals on all ports plus a protective case.
<b>Performance:</b>	Outstanding.

## TECHNICAL DESCRIPTION OF EXPEDITION SATCOM

<b>Make:</b>	Saturn MP (mini phone) Portable.
<b>Description:</b>	Lightweight, portable, world-wide, Inmarsat M-Satellite Earth Station.
<b>Dimensions:</b>	15"x 11"x 4.5"
<b>Weight:</b>	9kg
<b>Billing:</b>	Through Nera Telecommunications @ \$5 per minute. Bill paid direct to Nera.
<b>Source:</b>	Thatcham
<b>Use:</b>	Through the expedition for routine and emergency calls.
<b>Performance:</b>	Once set up and working it was very good but, in cold temperatures, would take a long time to settle. Calling most countries was easy but internally within Nepal was difficult. Batteries generally lasted around 3 hrs but towards the end were not holding the charge as well.
<b>Charging:</b>	3 x 320 Ni-cad batteries which were re-charged with a solar panel - also available from Thatcham.



Satcom in use with the Psion providing telephone numbers

# CHAPTER 6 - MEDICAL REPORT

## PREPARATION IN THE UK

1. The availability of a medical officer to participate in the Expedition was not confirmed until Nov 96, one month before the stores container left for Nepal. One month provided just enough time to seek advice and procure the necessary stores. The medical officer, Andy Gibson, was serving with Cdo Log Regt RM and this meant that most of the required stores were available from the sickbay or from the stores in Med Sqn. A hospital doctor would require more time to procure the stores.

2. A small supply of controlled drugs were deemed necessary for emergency treatment. To export these through British Customs, a Home Office license is required and was easily obtained from:

Action Against Drugs Unit  
Home Office  
50 Queen Anne's Gate  
LONDON  
SW1H 9AT  
Tel: 0171 273 3806

3. The medical stores list is at Annex A.

4. A short health brief was produced 3 months prior to departure which highlighted the vaccinations required for Nepal and explained some of the health risks that would be faced. The expedition members were encouraged to have a dental check-up prior to departure.

## MEDICAL RESEARCH

5. Thanks to the assistance of the Department of Nuclear Medicine at RH Haslar, it was possible to continue the research started on last years Service Expedition to Gasherbrum. In order to determine if there is damage to the cerebral vasculature at altitude, 10 members underwent cerebral perfusion scans one week before the

expedition departed and these will be compared with subsequent scans.

## PREPARATION IN NEPAL

6. In Kathmandu the medical stores were divided into two 30 Kg porter loads. There is always a risk that a load may be lost, so the 2 loads contained roughly the same contents. This task could have been performed in the UK. A small emergency medical bag was prepared and carried by the doctor during the walk in and proved very useful.

7. Also in Kathmandu, a small supply of emergency oxygen was acquired through the trekking agent for use in trauma or cases of severe altitude problems. The alternative was to import the oxygen from the UK. Although it is feasible to do this, the paperwork and packing arrangements are complex due to the potential hazards of bottled oxygen. This was arranged beforehand and future expeditions should not rely on procuring oxygen in Kathmandu.

## APPROACH TREK

8. The approach trek took 14 days, passing through many small villages without any organised medical care. At many of the rest stops the liaison officer would round up patients from the local community and act as interpreter. Most of the complaints were trivial in nature, however a florid otitis externa and two major burns cases were treated. Fire is a real hazard in rural Nepal. Most of the houses have a central open fire which is used for cooking and heating and it is not uncommon for young children to suffer serious burns from them. A young girl was treated who had a 2 week old burn injury which extended from her upper chest to mid thigh, from falling directly into the family fire. Her parents could not afford to take her to hospital, some 4 days walk away. Treating the locals was a useful way of maintaining a good relationship with the local population during the walk-in.

9. In the early stages of the approach trek 12 members suffered from gastro-intestinal problems. In most cases recovery occurred without treatment. Four people were treated with Ciprofloxacin and one with Imodium. Fortunately, no man-days were lost as a result of gastro-intestinal problems. Anecdotally, the absence of major problems of this kind is relatively rare in Nepal on this type of venture and is a tribute to the high standard of hygiene maintained by the cook staff. All cooking water was boiled for 15 minutes and all cooking equipment kept spotlessly clean throughout, regardless of environmental conditions.

10. A small natural spring exists at Pangpema. Unfortunately, the late winter meant that its output was very low and very silty when we arrived there. Attempts to remove the sedimentation were made using Millbank bags and a small commercial water filter but they were unable to provide the required quantity. Within a week, warmer temperatures improved the flow rate and removed the sediment and provided us with a good source of water.

#### **ALTITUDE RELATED PROBLEMS**

11. A major concern was to ensure that any problems due to altitude could be treated quickly. Three small oxygen cylinders were obtained in Kathmandu and a Gamow bag was obtained from Lt Cdr Steve Jackson. This is a small portable compression chamber which increases the pressure of the inspired air, thus simulating descent. Luckily it was not used, however, they should be considered standard equipment for future expeditions as a potential life-saver when casualties are unable to descend.

12. A short talk was given at BC identifying the signs and symptoms of the 2 serious altitude problems: high altitude pulmonary oedema (HAPE) and high altitude cerebral oedema (HACE). Nifedipine for HAPE and Dexamethasone for HACE are believed to be effective treatments and the use of these was

explained. Although these treatments are no substitute for descent, they are thought to improve symptoms and may be used in situations where descent is impossible. The use of Acetazolamide to assist in temporary acclimatisation was also explained but only one member elected to use it.

13. Most suffered with altitude sickness on arrival at BC (5139m). The main symptom was a throbbing headache which, fortunately, usually responded to simple analgesia. It took up to 10 days for all members to fully acclimatise to the altitude at BC.

14. The gradual gradient of the walk-in, time spent at BC and the technical difficulties low down on the mountain meant that all members were well acclimatised before climbing over 6500m. Fortunately there were no major altitude related problems.

15. A very useful mini reference guide is the micro edition of the High Altitude Medicine Handbook by Pollard and Murdoch, published by Radcliffe, which concisely summarises the current thinking on altitude sickness and its treatment.

#### **CLIMBING PHASE**

15. During the six week spell at BC most members remained relatively healthy. However, the standard service issue lip salve was unable to prevent severe sunburn to the lips which was extremely painful and affected most members. It is recommended that a good quality lip block is obtained in the UK. There were several cases of minor trauma including a lacerated finger which required suturing and one individual was severely sunburnt twice. The full list of patients treated is at Annex B.

16. There was one major trauma case which occurred when a cooker exploded in the face of our head cook causing partial thickness burns to his hands and face. Treatment required opiate analgesia followed by regular dressings.





Morning surgery at Pangpema - The scabliifter in his element

17. Of the 4 other expeditions at Pangpema, only one had a doctor. Advice and medication was provided to these expeditions, including analgesia and heparin to an American climber with a suspected deep vein thrombosis.

18. The availability of the satellite phone was reassuring as, weather permitting, an evacuation helicopter could be arranged in 24 hours which could take a casualty from our Base Camp to the hospital facilities in Kathmandu. The value of this was demonstrated when we used it to initiate the rescue of a member of one of the other expeditions. Fortunately there was no requirement for us to use it.

#### **RECOMMENDATIONS AND CONCLUSIONS**

19. The role of an expedition medical officer is both challenging and rewarding. Careful planning and preparation are required before leaving the UK if the team is to be self sufficient in the mountains. Teamwork and determination are essential qualities, as is an ability to practice independently to be safe and to inspire confidence. These are highly

desirable characteristics in a service doctor and it recommended that all possible assistance be given to service medical officers wishing to participate in future expeditions.

20. The following specific recommendations are made:

A medical officer is appointed early to allow time to obtain the appropriate stores.

Preparations should be made to cover every eventuality.

A local purchase of good quality zinc oxide lip block is essential.

A well stocked medical bag should be carried by the doctor during the walk in and out.

Ensure medical stores are spread evenly between porter loads.

Ensure that a casualty evacuation plan is in situ before it is needed.

A Gamow bag should always be considered.

Annexes:

- A. Medical Stores List
- B. List of patients treated.

**ANNEX A  
EXPEDITION MEDICAL STORES**

**ANALGESIA**

<b>DRUG</b> (std doses apply)	<b>TAKEN</b>	<b>USED</b>
Aspirin 150mg	200	50
Paracetamol 500mg	200	100
Solpadol	50	50
Temgesic 0.2mg	50	30
Ibuprofen 400mg	100	100
Pethidine (100mg)	10	2
Lignocaine 1% 20ML	2	0.5
Morphine 10mg	4	1

**ANTIBIOTICS**

<b>DRUG</b>	<b>TAKEN</b>	<b>USED</b>
Augmentin 375mg	200	50
Cefotaxime 1g IV	10	nil
Ciprofloxacin 250mg	200	50
Erythromycin 250mg	100	20
Metronidazole 200mg	100	20
Metronidazole Suppository	10	nil
Mebendazole 100mg	20	nil
Rabies Vaccine	4	nil

**CARDIOVASCULAR AND RESPIRATORY DRUGS**

<b>DRUG</b>	<b>TAKEN</b>	<b>USED</b>
GTN spray	2	nil
Heparin 5000iu/ml, 5ml	10	5
Salbutamol inhaler	2	nil
Becotide inhaler	2	nil
Codeine Lintus (1l)	1	1
Prednisolone 5mg	50	4
Adrenaline 1:1000, 1ml	5	nil

**SEDATIVE AND ANAESTHETICS**

<b>DRUG</b>	<b>TAKEN</b>	<b>USED</b>
Midazolam 10mg /5ml	5	nil
Temazepam 10mg	100	100
Ketamine 500mg/ml, 10ml	2	nil

**GASTRO-INTESTINAL DRUGS**

<b>DRUG</b>	<b>TAKEN</b>	<b>USED</b>
Gaviscon	100	20
Ranitidine 150mg	50	20
Dioralyte	100	20
Loperamide 2mg	200	30

Metoclopramide 5mg	50	20
Mebeverine 135mg	40	nil
Anusol	4	3

#### MISCELLANEOUS ITEMS

ITEM	TAKEN	USED
Anti fungal creams	20	5
Steroid creams	10	5
Auto transfuser	1	nil
iv fluids (Haemacel & saline)	14	nil
Giving Sets	3	1
Ambubag & mask	1	nil
Ophthalmoscope	1	
Aneroid Sphygmomanometer	1	
Zinc oxide tape	25	15
Sterile Dressings 10x10cm	30	25
Sutures	Assorted	3
Foley Catheter 14G & bag	1	nil
Scissors & needle holder	2 (each)	
Scalpels (disposable)	10	3
Sharps Box	1	1
Iodine Spray	5	2
NG Tube	1	nil
Minitrach & Guedel airway	1	nil
Thermometer	1	
BNF	1	
Inflatable Splints	2	nil
Tubigrip (large role)	1	
Medium sized cervical collar	1	nil
Kidney dish	2	
Venflons (green)	5	1
Syringes & needles	20	10
Bandages	25	15

ANNEX B TO  
BSG MEDICAL REPORT

#### ANNEX B

#### CONDITIONS TREATED ON EXPEDITION

Condition	Number of patients treated
Respiratory	6
Gastro-intestinal	20
Cardiovascular	1
Dermatological	14
ENT	3
Dental	3
Ophthalmic	4
Musculo-skeletal	6
Trauma	10
Neurological	30
<b>Total</b>	<b>97</b>



# CHAPTER 7 - FINANCIAL REPORT

## INCOME

1. As described earlier, fund raising efforts were aimed primarily at service sources (both public and non-public) as commercial sponsorship for the lesser known peaks is a rare phenomenon. Personal contributions accounted for 25% of total income, in line with current Adventure Training (AT) regulations. It was not originally intended to load officers with a higher contribution than other ranks, however, this measure was adopted after advice that it would improve the chances of a successful bid to the Sailors' Fund.

2. The Sailors' Fund and Royal Marines Central Funds provided the largest grants and were, therefore, our main Service sponsors. Army and RAF central funds also provided generous grants as did The RN Sports Lottery and The Joint Services Expedition Trust. The Nuffield Trust does not provide cash grants for AT expeditions, but our bid for a minor grant to purchase 14 high altitude sleeping bags was successful. Single service mountaineering clubs all supported the expedition.

3. The main income from public money was AT funding, JSET sponsorship and CILOR.

4. Other sources of income included revenue from the sale of expedition T-shirts and the sale of some equipment in Kathmandu.

## COMMERCIAL SPONSORSHIP

5. An approach for commercial sponsorship was made to Sanofi Winthrop, the pharmaceutical firm which manufactures the pain killer Solpadol. This met with considerable success and they agreed to sponsor the expedition to the tune of £5000. They were our main commercial sponsors and we were extremely grateful for their support. The Sanofi flag was taken to the summit.

## EXPENDITURE

6. In-country costs in Nepal are increasingly expensive and accounted for the greater part

of our expenditure. Porterage, in particular, is now extremely expensive compared to a few years ago. The peak fees paid by the expedition were also high. This is because 2 peaks were booked: Gimmigela and Pathibara (Pyramid Peak). The latter was booked in case Gimmigela proved either impossible or so easy that it could be climbed in 2 weeks. Either eventuality would have required an alternative objective for the team. In the event, Gimmigela occupied our full time and the bid to climb Pathibara was cancelled from base camp. Unfortunately, however, the peak fee was non-refundable.

The best way to get money into Nepal is a mixture of cash and travellers cheques (Sterling or US dollars) carried by hand. Opening a bank account in Nepal is not recommended, however, transferring money from a UK account to a Nepalese account is possible, but money can only be drawn in Nepalese Rupees. The same applies to the balance at the end of the trip so care should be taken. A credit card, Visa or Access, is handy for specific expenditure such as food and accommodation in Kathmandu.

7. In the hills, away from Kathmandu, the Sirdar is thankfully responsible for the payment of porters and the purchase of local food. It is, however, wise to carry a cash contingency for the unexpected. Porter strikes are common and we paid 10,000 Rupees to the owner of the dead yak.

8. Accounting for expedition expenditure in 3 currencies and numerous accounts can be complex. We used a financial software programme on the Psion palm tops which were excellent.

9. The expedition balance sheet is at Annex A. Thankfully, income exceeded expenditure and the balance of £1250 will help to offset the costs of the Joint Millennium 2000 project - currently the Kanchenjunga 2000 expedition.

Annexes:

A. Expedition Balance sheet.

**EXPEDITION BALANCE SHEET**

	INCOME	EXPENDITURE
BANK INTEREST	£ 146.68	
COMMERCIAL SPONSORSHIP	£ 5,000.00	
INDIVIDUAL CONTRIBUTIONS	£ 13,466.00	
SERVICE PUBLIC MONEY		
ADVENTURE TRAINING FUNDS	£ 2,100.00	
CILOR	£ 1,838.28	
JSET SPONSORSHIP	£ 1,000.00	
SERVICE NON-PUBLIC MONEY		
SAILORS FUND	£ 11,000.00	
RM CORPS FUNDS	£ 8,000.00	
RN SPORTS LOTTERY	£ 2,000.00	
NUFFIELD TRUST	£ 2,450.00	
JSET ENDORSEMENT	£ 1,500.00	
RAF SERVICE FUNDS	£ 900.00	
ARMY SERVICE FUNDS	£ 330.00	
SERVICE MOUNTAINEERING CLUBS	£ 700.00	
T-SHIRT SALES	£ 161.17	
AIR TICKETS		£ 7,342.00
BANK CHARGES		£ 98.12
COMMUNICATIONS		£ 1,975.78
CURRENCY CHARGES/COMMISSION		£ 17.45
EQUIPMENT		£ 4,793.54
FOOD		£ 1,065.26
IN COUNTRY EXPENDITURE		
AGENCY FEE		£ 1,241.54
AGENT'S COMMISSION		£ 2,921.87
BASE CAMP FOOD & FUEL		£ 2,372.49
BASE CAMP STAFF WAGES		£ 3,528.84
MISC		£ 607.76
PERMITS AND VISAS		£ 671.25
ACCOMMODATION		£ 958.39
EQUIPMENT PURCHASES		£ 63.52
TRANSPORT		£ 2,394.05
PEAK FEES		£ 6,250.00
PORTER CHARGES		£ 5,271.25
TREKKING FEES		£ 4,510.00
INSURANCE		£ 1,300.00
MISC		£ 169.77
EXPEDITION LAUNCH		£ 354.50
SATCOM CALL CHARGES		£ 1,046.41
STATIONARY		£ 347.80
NEPALESE VISAS		£ 40.00
KANCHENJUNGA 2000 EXPEDITION CONTRIBUTION		£ 1,250.54
<b>TOTALS</b>	<b>£50,592.13</b>	<b>£50,592.13</b>



The last word! - Pat doing the accounts on the Psion at ABC with Kanchenjunga in the background.

