

# Exercise Evaluation Report

## Southern Lakes AVOEX 2023

Location: Treble Cone - Wanaka  
Date: Friday 15 September 2023  
Report version: FINAL  
Evaluator(s): Aaron Halstead

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# 1. Executive Summary

The Southern Lakes area conducts an annual avalanche exercise (AVOEX) to allow the testing of various aspects of avalanche response and interoperability amongst several response agencies/organisations. The 2023 Southern Lakes AVOEX was held at Treble Cone on 31<sup>st</sup> August 2023. This was a functional real-time exercise using simulated multi-victim burials in a back country avalanche scenario.

Building on the feedback and areas for improvement from last year's regional AVOEX, there were a number of areas in the current year (2023) AVOEX that exceeded expectations. Communication and coordination were significantly improved from last year, and ensured the current AVOEX ran smoothly and efficiently.

The exercise was designed by the Police and Treble Cone Ski Patrol to test a regional response to a large avalanche multiple-burial event and was a category 1 Police led SAROP.

At 0955 a 111 call was made to Police by an informant of a multiple-burial back country avalanche near Treble Cone ski area – beyond Tower 5. The avalanche was described as 100mx200m in size and the informant could see the top chairlift at Treble Cone. The informant provided a Lat/Long of 1272706.5049136 and indicated there may be 6 people buried in the avalanche. The informant was skiing on their own and couldn't see anyone on the snow surface.

An IMT was established at SAR base, with a forward Ops room at Treble Cone ski area base. The avalanche involvement required a regional avalanche response including Ski Patrol teams from Treble Cone, Cardrona and the Remarkables, along with dog teams, heliski guides and Wanaka ACR. Aspiring Helicopters was dispatched as the transport and rescue helicopter.

There was a clear mission and IAP outlined early with the IMT, and resource allocation was generally very good.

The mechanics of the avalanche search and recovery were well executed. Patient triage and extraction off-site in an expedient manner to an appropriate medical facility can be improved.

Key recommendations from the exercise include: Updating the avalanche preplan and incorporating maps into the ops room, and providing cue cards and resource lists for the ASC; Incorporate a complete extraction plan-to-medical care facility component for future exercises, and allocating a dedicated medical triage person; Ensuring the accident site commander (ASC) gets assistance early to support the on-scene command coordination, and the ASC should update all teams with regular SitRep's.

The general structure and nature of the exercise worked well to test individuals, teams and broader cross-operations integration.

Participants were highly engaged throughout the exercise, and the tempo remained generally high. There were key learnings that predominantly self-identified through the hot debrief process.

The outcome of the AVOEX scenario was successful in line with the stated objectives.

# 1. Recommendations

## Plans/Briefings

Ensure the Avalanche Pre-Plan is updated pre-season with contact details of key personnel. Detailed ski areas maps in the IMT and ops room would assist with situational awareness. Establish a resource list that can be disseminated to ops rooms to aid in planning. Develop cue cards for resources so an ASC doesn't respond with 'send everything' and can specify which resources may be required to help guide IMT with the response. A reminder for Police IMT to make contact with the Ops room early and establish clear lines of communication and support. This will also assist in dispatching the first party early. Provide each incoming on-site team with a situational awareness briefing and regular radio SitRep's so they can all appreciate the broader picture and prevent cross-over of effort.

## Patient Care

Future exercises should incorporate a complete extraction plan to medical care facility component following Avalife guidelines. This should include a goal of no more than one hour from avalanche burial extraction to delivery at an appropriate medical facility. Ensure response teams have Avalife and MountainSafety.info cue cards to aid their methodology for extraction and patient priority and care. Allocate a medical triage person (doctor/paramedic) to ensure they have oversight of all patients and can advise ASC of patient priority extraction off-site in an expedient manner to the most appropriate medical facility.

## Resources

Use dog teams efficiently in the first 20 minutes for likely burial locations – provide dog handler with schema/concept of burials/groups so they can assist in targeted search technique. Ensure all dog teams in the region are advised and prepare for dog team backup to assist rotation on-site of fresh dogs. Establish ability to hear all radio channels in the Operations room. ASC should request early assistance for themselves to aid in briefings, radio channel monitoring, scribing and staging area management. Ensure there is appropriate marking of site with ICAR flagging, particularly important if the situation extends to a protracted search including probe lines. This will also assist incoming teams with identifying locations already searched.

## Introduction

The Southern Lakes area conducts an annual avalanche exercise (AVOEX) to allow the testing of various aspects of avalanche response and interoperability amongst a number of response agencies/organisations.

Each year the exercise is generally rotated between being held in Wanaka or Queenstown. For 2023 the exercise was held at Treble Cone in Wanaka.

Allocating, deploying and managing the various assets available during an AVOEX or actual avalanche response is a key priority to ensure success in a timely and efficient manner. And a well structured and run IMT and onsite ASC team are also crucial elements of success.

Southern Lakes AVOEX 2023 was initially planned for mid July, however due to lack of snow cover and weather on the planned day, it was deferred until late August.

The exercise was played out in real-time and allowed for a range of issues to be practiced and worked through by participants.

Role-players were used during the exercise to simulate actual patients, and there were several 'burials' providing challenges to the ASC and rescue teams that replicated a realistic situation.

### 1.1. Background to the Exercise

The intention was to conduct a scenario AVOEX in order to allow a realistic situation where a caller dials 111 to the Police and informs of an avalanche near the Treble Cone ski area - between the towers gate and boundary line (Towers 5 runout). The call was made to the Wanaka Police duty Constable, who then commenced initial action per the Southern Lakes District avalanche plan. Initial action occurred at Wanaka Police Station, and then transferred to Wanaka SAR Base (full IMT). An ops room was also established at Treble Cone base with ski area management, and had a senior Police Officer in attendance to help mentor.

Treble Cone ski patrol assumed the role of first party (due to proximity) and second party, along with appointment of the ASC. The first dog team arrived from Treble Cone ski snow mobile. Aspiring helicopters was used as the primary response helicopter to transport all additional arriving teams. Patrol and heliski teams were focused on search techniques and primary medical care. The Treble Cone doctors on site were focused on advanced life support and triage. Whilst Wanaka ACR was focused on extraction and transport.

Treble Cone medical staff were on site as patient actors. The IMT functions for a Category 1 SAR event were commenced and maintained via SAR base until the end of the exercise.

### 1.2. Dates, Location, Organising Agency(s)

The avalanche exercise was run on Thursday 31 August 2023 at Treble Cone Ski Area, Wanaka. Treble Cone Ski Patrol and Wanaka Police designed and ran the exercise.

### 1.3. Participating Organisations

NZ Police, Southern Lakes IMT

Treble Cone Ski Patrol

Cardona Ski Patrol

Coronet Peak Ski Patrol

Remarkables Ski Patrol

Heliski Guides (Harris Mountains Heliski and Southern Lakes Heliski)

Wanaka SAR ACR Team

SAR Dogs Avalanche NZ

Aspiring Helicopters

Agencies receiving information on the exercise: RCCNZ, Police South Comms, Air Desk.

#### 1.4. Exercise Aim

To follow the district avalanche response plan by safely initiating, responding to, managing, and resolving a suspected multiple-burial type of avalanche situation by safely locating and recovering all persons affected.

#### 1.5. Exercise Objectives

The overarching objectives for this exercise were:

- Test the Southern Lakes avalanche pre-plan and response systems
- Confirm best-practice use of MountainSafety.info methodology and guidelines
- Appropriate medical care and Avalife pathways for all patients
- Ensure communications are functional, appropriate, and effective
- Ensure there is an efficient and effective use of resources
- Confirm appropriate *avalanche* site management

#### 1.6. Exercise Scenario

At 0955 a 111 call was made to Police by an informant of a multiple-burial back country avalanche near Treble Cone ski area – beyond Tower 5. The avalanche was described as 100mx200m in size and the informant could see the top chairlift at Treble Cone. The informant provided a Lat/Long of 1272706.5049136 and indicated there may be 6 people buried in the avalanche. The informant was skiing on their own and couldn't see anyone on the snow surface.

The avalanche involvement required a regional avalanche response including Ski Patrol teams from Treble Cone, Cardrona and the Remarkables, along with dog teams, heliski guides and Wanaka ACR. Aspiring Helicopters was dispatched as the transport and rescue helicopter.

This was a Category I SAROP, led by the Police (who took the initial call then established a Police IMT at SAR base) with tasked On-Scene Command to Treble Cone Ski Patrol who managed the response and recovery effort on-site.

#### 1.7. Exercise Scope

This exercise focused on the following components:

- Police District IMT management of a Category I SAR, including:
  - Activation of local area Police SAR;
  - Escalation and set up of local Police IMT;
  - IMT support and coordination of local SAR and resource allocation; and
- Coordinated avalanche SAR response to a multiple-burial situation, including:
  - Initial response of first/second/dog party avalanche response and ASC appointment;
  - Site management and coordination;
  - Safe and efficient location and extraction of burial victims;
  - Triage and transport of rescued people.

## **2. Evaluation Methodology**

### **2.1. The agreed outcomes of the evaluation activity**

Carry out observation of the field exercise and its function in an AVOEX scenario. Observe actions to develop and enhance functional avalanche response methodology and to practice and refine plan development.

To ensure value is delivered for all personnel involved.

A report to be written outlining observations of the AVOEX in relation to the stated objectives and the KPIs.

Recommendations to be made based on those observations.

### **2.2. Evaluation scope**

The evaluation scope was primarily focused on a region wide response to an avalanche occurring. This included evaluating the following:

- Test the Southern Lakes avalanche pre-plan
- Confirm best-practice use of MountainSafety.info and Ava-life guidelines
- Confirm the use of Avalife to optimise resource use for the greatest good
- Ensure communications are functional, appropriate, and effective
- Ensure there is an efficient and effective use of resources
- Confirm appropriate site management

### **2.3. Aspects of the exercise observed, what was not observed**

All aspects of the field exercise were observed. The evaluator did not personally evaluate IMT (SAR base) or the ops room (ski field base). Feedback, notes and verbal comments were incorporated into the report findings from all locations.

The evaluator was present at the field exercise from the time the exercise commenced till the time it ended and had access to every area appropriate – particularly all briefings, and two radio channels to hear comms.

The Hot Debrief was also attended immediately after the exercise.

Evidence was collected via observations, discussions, photos and notes taken at the time.

### **2.4. The process followed in preparing and submitting the report**

Once the notes, photographs and documents were all collated the evaluator report was completed in draft format and submitted for comments. This was then finalised and submitted.

### **2.5. Other information**

N/A

### 3. Findings

Comments made in this section are from observations and evidence based on the six major objectives, and in relation to the KPI's.

#### **5.1 System test: Test the overall systems response in the Southern Lakes region. With a focus on the rollout of the response and overall systems process.**

Southern Lakes pre-plan was used as the reference document by the IMT.

Critical contact list appears out of date with some contacts.

Establishing a resource list for the ops room would be useful (emailed out if required).

A useful resource would be local ski area maps in the ops room.

IMT was activated relatively quickly, although as was noted in the debrief document, initial calls need to be highly targeted and concise as many calls need to be undertaken to get key resources under way immediately.

It is critical to contact the ski field asap to ensure they are aware of the initial call, and can initiate an immediate response – first party rescue, and also 'eyes' on the ground to give IMT situational awareness. In this exercise this appeared to be assumption rather than an action. Great initiative getting a Lat/Long early to help direct helicopter resources.

Reminder for IMT to call all heliski company phones as they may have teams/helicopters in close vicinity (something that didn't occur in the recent actual Remarkables avalanche).

Some details in the pre-plan not current (particularly personnel in the contacts section).

#### **5.2 Application of current best practices as outlined by Mountainsafety.info: searching, probing, digging. Use of Avalife to optimise resource use for the greatest good e.g. searching and excavating and to assist with extraction priority**

Search methodology appeared to be good and allocated well.

There was some confusion around where likely burials were and determination of the two parties. Stepping back and conceptualising the site at various intervals would have allowed the ASC to build a visual awareness map to target resources. This may also have assisted dog teams in targeting the likely burial zones not already searched.

Mechanics of search, probing and digging were efficient and as per mountainsafety.info guidelines.

Extraction priority was generally good, however as is noted in 5.3, once extraction has occurred, the priority of effort then becomes transporting off-site the most critical patients.

The ASC scribe had excellent written records – 3 clipboards: personnel on site (who, where from), patient information/status, and a site map of known victim locations.

Excellent use of the Recco, and also for using supplementary Recco in third party.

#### **5.3 Patient Care: Appropriate medical care and avalife pathways for all patients**

A medical triage person would have assisted the ASC in determining priority of effort for the injured victims. The ASC was at times trying to work this out with information from multiple people. If a medical triage person (doctor/paramedic) was allocated, then this person can conceptualise the medical priority list and advise ASC on best course of action for the most appropriate and efficient transport decision.

Medical care of individual patients was as per avalife pathway.

Consider using additional on-field personnel to aid in support roles – for example, given how close it was to the ski area, ski instructors could be utilised onsite for digging/probing and helping to move patients, and also for bringing in and distributing items to protect/warm patients.

Use notional Heli Otago as an ambulance – to get patients off site, (in reality would have probably used helicopter assets to transport patients and backfill with patrollers/guides).



#### **5.4 Communication: Adequate communications resources brought to site. Radio comms between parties arriving via Heli + onsite parties. Adequate safety briefing for all parties arriving on site.**

Helicopter pilot (Aspiring Helicopters) ran an efficient air transfer component in the early stages, which included in-air briefing of teams to ensure they had situational awareness on arrival at site.

Comms on site appeared to work well. One of the guides had a radio that didn't seem to work. Good liaison from helicopter to site and ski field ops room.

Police IMT to make contact with Ops room early and establish clear lines of comms and support. This early call is vital to get the first party under way, which also provides the ops room with onsite intel early and will assist with resource allocation.

Safety briefings occurred with ASC and at the helo landing area.

Getting a 'pindrop' or Lat/Long early is very useful to direct resources – particularly helicopters and other teams arriving. This will also assist IMT in logistical planning for transport extractions (depending on terrain configurations for landing, hover loading or HEC). Establish ability to hear all radio channels in ops room.

#### **5.5 Efficient/Effective use of resources: Heli resources, ACR personel, and ground based rescuers used effectively**

Efficient use of helicopter resource.

Once a critical patient had been extracted from the snow, and given the significant time delay in removing this patient from site, it may have been a good use of the empty helicopter heading to Coronet Peak/Remarkables to consider backloading this critical patient.

Ski-field ops room worked well and relay near the site was important. Having the ops room established early and staffed by senior managers is vital to help allocate resources (snow mobiles, snow groomers, staff, blankets/mats, food/drink) as well as implement control measures such as road control (if a number count on the mountain is required), establishing a base area landing zone, or to close areas off to assist in the search.

ACR were provided a thorough briefing from the pilot, and then from the safety person on site. They had good awareness of what was required and where to go in order to safely extract each patient.

#### **5.6 Site Management: Appropriate marking of site with ICAR flagging, safe zones, heli LZ + medical staging areas.**

The ASC directed the site/scenario well. The ASC could have used assistance for radio traffic (at one point putting Police on hold for a significant period while trying to direct teams via radio), and an additional person to control the staging area.

When a number of Patrollers converged at the staging area (all in red jackets) it was difficult for teams to know who to talk to and who was in charge. Having the ASC in a high-vis vest may have assisted so in-coming people knew who to talk to.

Dog teams were critical to the success of the exercise, and as such should be given a thorough situational awareness briefing and directed early to most likely probable areas (POA/POLF). Reminder that dog teams provide the best value early – first 20 mins.

Priority is victims outstanding, and "what don't we know?"

Flagging on site was adequate. If it was an extended op with extensive probing required, more flags and better flag lines would have been necessary.

Staging areas (including helicopter and medical) were well managed and controlled. The Lower landing site was not ideal.

Brief all teams with schema/concept – where burials are, to stop purposeful wandering.

Providing status updates over the radio (all traffic) would have been useful to ensure everyone was aware of what was required and may have curbed some waning enthusiasm.

## 4. Conclusions

Building on the feedback and areas for improvement from last years regional AVOEX, there were a number of areas in the current year (2023) AVOEX that exceeded expectations. Communication and coordination were significantly improved from last year, and ensured the current AVOEX ran smoothly and efficiently.

There was a clear mission and IAP outlined early with the IMT, and resource allocation was generally very good. Creating situational awareness for both the field teams and IMT is vitally important to achieve success, and quick SitRep's and concise/detailed briefings will aid this.

The mechanics of the avalanche search and recovery were well executed. Patient triage and extraction off-site in an expedient manner to an appropriate medical facility can be improved.

Document resources can be enhanced by ensuring; the pre-plan contact list is current, adding ski area maps to the ops room/IMT, and establishing a resource list for the ops room.

The general structure and nature of the exercise worked well to test individuals, teams and broader cross-operations integration.

Participants were highly engaged throughout the exercise, and the tempo remained generally high. There were key learnings that predominantly self-identified through the hot debrief process.

The outcome of the AVOEX scenario was successful in line with the stated objectives.

## 5. Appendices

### Appendix A – Documents Reviewed during the AVOEX

This appendix lists the documents reviewed by the Evaluator throughout the exercise including prior to the exercise, during operations and post event.

- SAREX 2023 Police Briefing
- SAREX 2023 Email to participants
- SAREX Patient Briefing
- Wanaka Avalanche Pre-Plan
- Run Sheet SAREX 2023
- Heli Run Sheet
- Avalanche Exercise Police Briefing
- IMT Log
- ACR Team Debrief Notes
- IMT Debrief Notes
- Initial Action – Police Call Taker Notes
- IMT Room Boards – IAP, Log, Track Plus Map and Communications, ACR team Deployment

## Appendix B – Functional Teams Debrief Feedback

### Sample of Hot Debrief Feedback – Functional Teams

Functional Team	Things Done Well	Areas For Improvement
<b>IMT</b>	<ul style="list-style-type: none"> <li>• Use of the pre-plan went well. Logging of times/info was good.</li> <li>• Comms generally worked well, and the relay plus on-field IMT worked well for coordination (with the full IMT at police station).</li> </ul>	<ul style="list-style-type: none"> <li>• Amend critical contact list.</li> <li>• Establish ability to hear all radio channel in ops room.</li> <li>• Detailed ski field maps for ops room.</li> <li>• Establish a resource list in ops room which can be emailed out should it be required.</li> <li>• Police IMT to make contact with Ops room early and establish clear lines of comms and support.</li> </ul>
<b>ASC</b>	<ul style="list-style-type: none"> <li>• Comms pretty good.</li> <li>• Great to have guides in first load.</li> <li>• Safety manager did safety briefings to all incoming teams.</li> <li>• Good visual of the site.</li> </ul>	<ul style="list-style-type: none"> <li>• Keep recco moving.</li> <li>• Cue cards for resources.</li> </ul>
<b>EXERCISE PLANNER</b>	<ul style="list-style-type: none"> <li>• Good comms.</li> <li>• Rescues looked pretty good.</li> </ul>	<ul style="list-style-type: none"> <li>• Could have done with help, esp radios and scribing.</li> <li>• Get flags out on site.</li> <li>• Deal with critical patients on site.</li> </ul>
<b>GENERAL – ALL TEAMS</b>	<ul style="list-style-type: none"> <li>• Complex site.</li> <li>• Dogs were critical to get early.</li> <li>• Tasked well on arrival from helo.</li> <li>• Directed well.</li> <li>• ACR had lots of info.</li> <li>• Extractions were good – mountain safety.info.</li> <li>• Mechanics of rescue – good.</li> <li>• Logging – good.</li> <li>• Comms – good.</li> <li>• Ski-field IMT worked well and relay near the site was important.</li> <li>• Teams worked well together.</li> </ul>	<ul style="list-style-type: none"> <li>• ASC needed assistance – with comms, task allocation, briefing, etc.</li> <li>• Dogs best value early – first 20 mins.</li> <li>• Brief all teams with schema/concept – where burials are, to stop purposeful wandering.</li> <li>• Provide status updates.</li> <li>• Enthusiasm waned.</li> <li>• Know where the flags are.</li> <li>• Lack of direction of where to go.</li> <li>• Low landing site not ideal.</li> <li>• Use instructors, others on ski field for blankets, 'hands' to help, probing, etc. Patients – priority is the critical patients (off site asap), need triage, times. Use notional Heli Otago as a ambulance – off site, (in reality would have prob used helo assets to transport pts and backfill with patrollers/guides).</li> <li>• Dog teams need to strategically work the site, working downwind.</li> </ul>

## Appendix C - Timeline of Exercise Events

Two timeline records are below – Onsite of avalanche timeline, and IMT Log timeline.

### Onsite Avalanche Scenario Timeline

Time	Action
0955	Avalanche witness calls Police.
1011	Treble Cone Ski Area notified.
1015	First Party radioed and responding. Lots of comms with ski area manager, possibly 6 people involved.
1019	First victim uncovered, IMT established at ski base, witness – says there is a second party of 2 people involved, comms to Ch2.
1025	Second recovery, victim is unconscious and critical.
1029	Quizzing witness, ASC needs to call in what they want (dogs, helos, teams).
1034	Helicopter arrives, third strike, 5 ski guides.
1037	Helicopter to Cardrona, helipad getting set up – 4 guides available to search.
1039	Dog team strike, good comms from ASC to guides, ESX07, victim uncovered with ?abdomen/lower leg injuries – deteriorating.
1058	Cardrona Ski Patrol team arrives.
1122	Coronet Peak/Remarkables Ski Patrol teams on site.
1135	SitRep requested from a person on site. Fresh dogs requested. 4 patients – 2 critical, 2 minor. 22 people on site (excluding patients).
1140	Priority should be critical patients off the site, 75 mins – patient still on snow.
1201	Helicopter lifts rescuer (ACR) to patient '2' – priority patient who is critical.
1215	Dog finally indicates last buried victim.
1221	Patient '2' extracted via ACR/HECS – approx. 2 hrs after being uncovered
1224	Patient '1' extracted.
1229	3 <sup>rd</sup> patient extracted, followed by 4 <sup>th</sup> patient.
1245	End ex, all called in for hot debrief.
1315	All leave avalanche scenario site.

### Wanaka SAR Log

Incident Date: 31/08/13

Page No: 1

Operation Name: Treble Cone Av Ex 2013 Log operator: SAR IMI

#### Critical Timings (hrs):

Incident occurred	Date	Time	Wanaka SAR Coordinator advised	Date	Time	Teams deployed	Date	Time
	31/08/13	0955		31/08/13	1036		31/08/13	1136 (ACR)
Police / Comms advised	"	1000	Action / Planning commenced	31/8/13	1025	Subject located		
Assistance requested Ambos / RCCNZ etc			Assistance received			Other		

[Enter all decisions and actions, worker times, radio and phone comms, briefings, etc] ENSURE FATIGUE REGISTER completed prior to team departure]

Time	From	To	Message	Acknowledged
			SAREX	
			AVALANCHE at Towers 5 Treble Cone backcountry	
			AC Aldo Holt 027 567 5554	
10:22	TC Patrol	IMT mobile	Left to ring out as SAR base normally unattended	
10:25	TC Patrol	ACR coord	Exercise Query 6 buried, 2 uncovered. TC resources - 4 patrollers (incl AC), 1 dog team (2 pax + dog)	
10:36	SAR Base	ACR	Request for availability and to come in	
10:40	HGR	SAR Base	5 Heli ski guides dropped at site	

### Wanaka SAR Log

Incident Date:

Page No: 2

Operation Name:

Log operator:

10:40	HGR	SAR Base	On way to Cardrona	
10:45	Heli Guide	AC	1 heli ski guide setting up heli landing zone, other 4 available for tasking	
10:50	HGR	SAR Base	5mins to avo site with Cardrona team	
10:55	HGR	SAR base	Dropped Cardrona team at site, enroute to Coronet Peak	
11:00	SAR Base	HGR	Final tasking to collect 2ACR from SAR Base after Coronet team dropped	
11:02	AC	IC	Update from site	
11:13	HGR	SAR Base	6mins to site with Coronet team 11:25 eta at SAR Base	
11:15	IC	ACR	Briefing to team	
11:22	TC IMT	SAR Base	Sally Norman 021 766 950 IMT setup at ski field 850 guests at field, operating as normal	
11:30	IC	TC IMT	TC IMT will liaise with AC on requirements and pass back to surbase	
11:36	HGR	SAR Base	2 ACR on board Will deliver to site then shutdown and await instructions from IC	
11:40	TC Patrol	SAR Base	Update - 4 uncovered, 2 critical 22 rescuers on scene	
11:44	IC	TC Patrol	Please coordinate extraction of critical patients using ACR and Heli	

### Wanaka SAR Log

Incident Date:

Page No: 3

Operation Name:

Log operator:

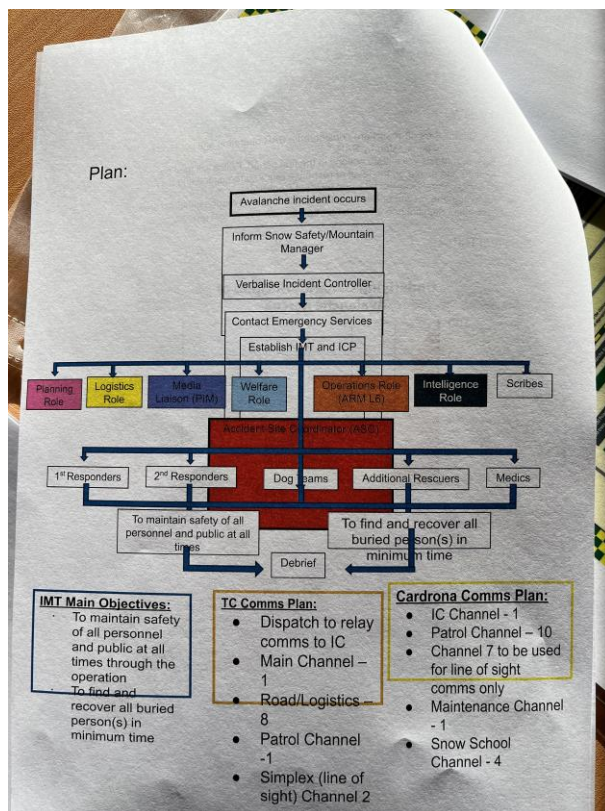
11:49	TC Patrol	IC	Confirm starting extraction. 24 rescuers on site Now treating remaining parties as recovery Avalanche was size 3	
12:00	TC Patrol	IC	5 <sup>th</sup> Person unresponsive and starting extraction of critical patients	
12:21	TC Patrol	IC	Names of 6 victims confirmed	
12:26	TC Patrol	IC	Found sixth victim unknown status, 1 group of 4 and 2 unresponsive in another party unsure of the size of that party. Tasked TC patrol with identifying unresponsive 2 party victims 12in order to establish party size and contact details.	
12:35	HGR	SAR base	Sitrep: 3 critical patients removed from site	
12:36	TC Patrol	IC	6/6 recovered, Site Clear, 3/6 critical and have been extracted, 3/6 minor injuries.	
12:50	HGR	SAR base	Gone to get fuel and return to site for extraction of teams to Coronet and Cardrona	
13:03	TC IMC	IC	Exercise Ended	



## Appendix D – Evidence of IMT and Field Teams in Action

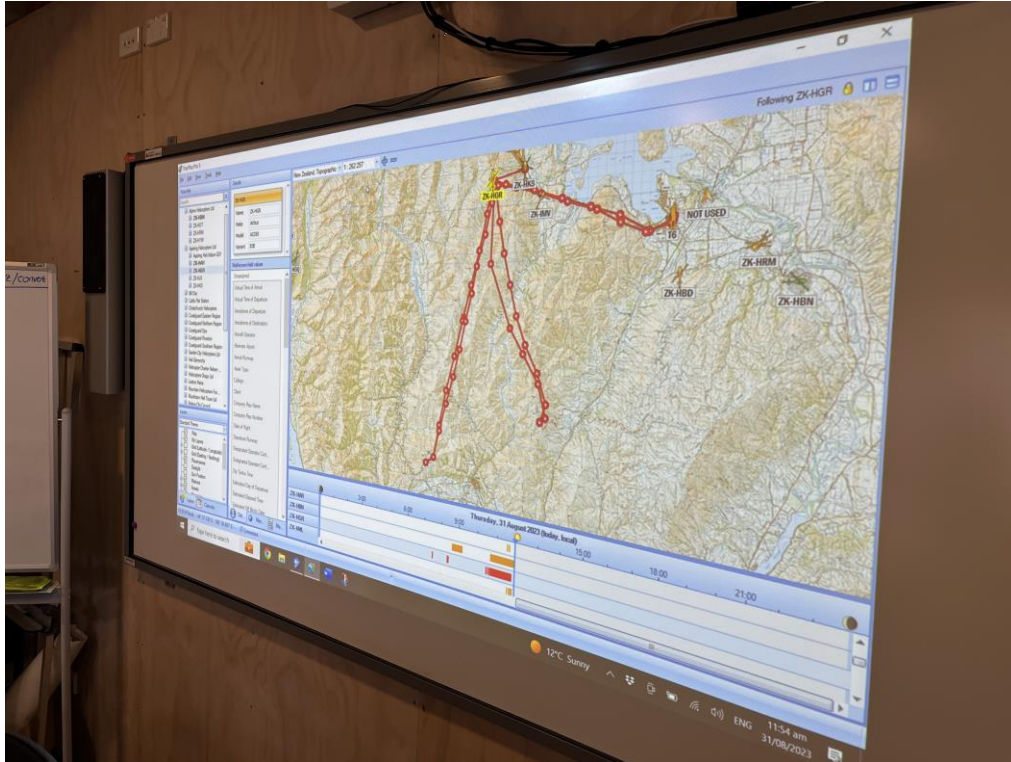


IMT in Operational Mode



Treble Cone Avalanche Pre-Plan Flow Chart





TracPlus – Live tracking of Aspiring Helicopters: ZK HGR

**Handwritten Notes on the Left:**

- Building Code - Revised
- 1242406
- 50471316
- 1000hrs advised
- 6 Buisard
- Sites of Road unroad
- 100x200 wide
- 3 of 6 removed - 1 critical
- To locate buried
- To aSEA required
- 12-15
- 2nd - Rescue Unit arrival
- 6/16 recovered
- 4/16 Critical
- 3/16 - critical & have been expanded
- 3/16 - minor injuries

Site	Time	Action
Site 1	1	Call back to base with Roping heli. Report to team.
Site 2	2	Forward to base. Report to ASE. Roping heli.
Site 3	3	Forward to base. Report to ASE.
Site 4	4	Send to base. Report to ASE.
Site 5	5	Watch site. Report to ASE.
Site 6	6	Coordinate - ASE. Report SEWARD to IC. Coordinate. Marked boundaries.

IMT Operations Board



ASC with first party and dog team in background



Dog and Handler arriving – Treble Cone Ski Patrol





Teams with site in background – and patient extraction occurring.



Extracting patient '1' via HEC



Avalanche scenario site overview – multiple teams working the site



ACR team arriving at patient 2 with stretcher

## SAREX Patient Brief

**Date:** 31<sup>st</sup> August

**Location:** Treble Cone Ski Area

<b>Terrain</b>	Access is on foot or preferably skis/board. You will need to be capable of riding advanced Intermediate terrain, off piste in any condition. Ideally you will be transported from site via heli with skiing as a backup
<b>Time</b>	Meet 0830 Treble Cone Base to brief and get dressed. 0900 load 6 seater and travel to site. 1000 scenario begins. Cam to escort to site
<b>Weather</b>	It will be cold! Dress warm! Update on Wednesday
<b>Clothing</b>	Warm clothing. Layers. Bring pack with extra layers. Wind proof layers. Gloves. Ear, eye and sun protection. Appropriate footwear (stiff boots/ waterproof if not skiing). Walking poles. Ski touring equipment if you have it. Foam mat to sit on.
<b>Equipment</b>	Ski touring equipment preferable Normal skiing/snowboarding equipment
<b>What To Do</b>	There will be no live burials in the scenario. Packs and other equipment will be buried in the 'avalanche'. Once these packs etc are found and extracted from the snow you will enter the site and become the extracted patient. You will be assigned a specific patient from the patient sheet and shown where you will be extracted from the snow. You will be staged off to the side of the 'avalanche' until then. You will be staged on the ridgeline with Cam who will dispatch you to the appropriate place at the appropriate time
<b>Patient Cards</b>	You will each have a patient card on you with vital signs etc so your rescuers can give you appropriate treatment. For vital signs etc that can't be measured you can verbally brief your rescuer
<b>Expectations / Goals</b>	This is a serious exercise with a lot of time and financial investment from many parties. Please do your utmost to be professional. Please within reason act out your patient. There will be a debrief after the event. Please give feedback on the medical attention you received as this is one of the main goals of the exercise
<b>Helicopter Safety</b>	See Below – helicopter safety instructions.
<b>Additional Hazards</b>	Sliding danger. Exposure to elements. Noise.