

RISK MANAGEMENT DOCUMENT

INTRODUCTION

Turoa and Whakapapa ski areas are situated on the southwest and northwest slopes of Mt Ruapehu, in the central North Island. Mt Ruapehu is the largest of the three volcanoes in the Tongariro National Park. The highest peak of the mountain is 2797 metres, while the ski areas are situated between 1530 metres and 2322 metres. The terrain consists of large lava flows forming bluffs and scree slopes. The surface is extremely rugged and vegetation is sparse.

The ski areas cover approximately 1000 hectares and facilities are widespread. Modern over-snow transport and high-speed lifts provide access during winter months. Whakapapa and Turoa are the largest ski fields in New Zealand and are operated by Ruapehu Alpine Lifts Ltd (RAL).

The ski areas are entirely within Tongariro National Park and are, therefore, subject to the provisions of the National Park Act 1980 and the Conservation Act 1987. RAL also complies with the Resource Management Act 1991 and the Health and Safety in Employment Act 1992.

“Ruapehu Alpine Lifts will endeavour to provide a full range of Ski Area Safety Services within the Ski Area Boundary”.

RAL is committed to the protection of its customers from accident, injury or damage.

RAL is aware of the need to provide its customers with a safe and healthy place in which to enjoy recreation time. To this end, suitable staff training is given to employees who will encounter hazards in the course of their work and RAL takes all practicable steps to eliminate, isolate or minimise hazards.

Safety Services Include:

- Avalanche Control
- Terrain Hazard Strategies
- Trail Marking
- Boundary Signage
- First Aid and Rescue Services
- Fully equipped Accident and Medical Centres
- Trail and Lift Clearances
- Ski Area Sweeps
- Low Visibility Management Strategies
- Snow Surface Hazard Strategies
- Backcountry Advisory (Open or Closed)

EQUIPMENT STANDARDS

All ski and snowboard equipment is subject to a pre and in season maintenance programme. This is carried out in accordance with industry and manufacturer guidelines. Each equipment component is inspected and evaluated by our staff.

PUBLIC SAFETY INFORMATION

There are several different forms of information available to the public regarding the ski area operation:

Mountain Weather Conditions and Ski Field Operational Status: Snow and weather reports are published on our website www.mtruapehu.com and sent out to various retail outlets, radio stations and local guesthouses. Information is available from 6.45am daily.

The weather on Mt Ruapehu is sometimes extreme and can change in a very short space of time. Always have adequate clothes available for ALL conditions.

Weather reports and daily snow reports are displayed in Customer Services, ticket booths, cafes and rental outlets. Please familiarise yourself with the current conditions before starting your day on the ski field. Trail maps are also available from Customer Services and our retail shops.

Medium Range Weather Forecast: Available on the ski area Information Boards in Customer Services and cafes around the mountain. There is also a weather link from our website.

Backcountry Avalanche Forecast: These are commissioned by the Department of Conservation and are displayed on information boards in Customer Services and the cafés. Information can also be accessed via the internet at www.avalanche.net.nz.

Trail Information: Trail maps are available from several locations around the ski area, including Customer Services and the retail outlets. They give the location of the cafés, ski patrol and toilets. Trails are colour coded as per international standards.

AVALANCHE MONITORING

Ski Patrol monitors the weather and snow conditions and run a snow safety programme that includes avalanche control. Areas can be closed due to avalanche danger and use of explosives. The avalanche control programme does not operate out of ski area operating hours; therefore extreme caution must be taken if you are moving around the mountain at these times.

Always respect closed signs, roped off and restricted areas and follow the instructions of ski patrol at all times.

TRAIL INFORMATION AND BOUNDARY SIGNAGE

RAL has adopted international symbols for trail marking on both their ski areas. They provide guidelines for snow users to differentiate between the perceived difficulty and suitability of trails within the ski area boundary.

The definitions and marking guidelines are as below:



GREEN CIRCLE
Signifies easiest terrain,
most suitable for beginners.



BLUE SQUARE
Signifies more difficult
terrain, more suitable for
intermediate users.



BLACK DIAMOND
Signifies challenging terrain,
more suitable for advanced
users.



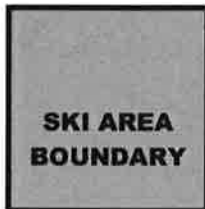
DOUBLE BLACK DIAMOND
Signifies extreme terrain, not
suitable for most recreational
users.

At key exit points the use of large visible Ski Area Boundary signs are placed to warn users of the ski area limits.

The safety signs and banners used by RAL are employed to alert snow users to potential hazards and no-go areas. Where appropriate, international symbols are used to denote advisory, warning or danger signs and these have yellow, orange or red backgrounds with black writing.



YELLOW BACKGROUND
Advisory Signage



ORANGE BACKGROUND
Warning Signage



RED BACKGROUND
Danger Signage

ACCIDENT REPORTING

If you are at the scene of an accident you should:

- Ensure that the accident is reported to ski patrol. Ski patrollers can be identified by their red jackets marked with white reflective crosses. Other staff members can radio / phone them if necessary.
- If possible, cross a pair of skis above the site of the accident.
- Remain at the accident site until ski patrol arrives.

FIRE

All buildings on Mt Ruapehu are required to meet standards as outlined in the Building Act 1992. They are also required to meet standards outlined in the Tongariro National Park Building Code. All Ruapehu Alpine Lifts buildings are facilitated with fire hoses and fire extinguishers.

LAHAR AWARENESS

Turoa and Whakapapa Ski Areas are situated on the slopes of Mt Ruapehu, which is an active volcano. There has been volcanic activity as recently as 1995 and 1996, which came in the form of eruptions, lahars and ash fall.

There are no actual lahar paths going through the Turoa Ski Area, however, there are several through the Whakapapa Ski Area. There is an early warning system in place that warns ski area users of any lahar events that are in progress. A lahar event is a stream of mud, rocks and water that is ejected from the mountain and proceeds down the mountain following valley floors at a speed of around 60 to 90 kilometres per hour.

Recent lahar events have gone through Whakapapa Ski Area, causing damage to facilities. Parts of several lifts are in the path of lahar activity and there is a safety plan in place that is followed by all staff should an event occur. If the lahar warning system is activated a whooping siren will sound followed by a spoken message: "Eruption is imminent, please move to higher ground".

The safety plan is as follows:

- Lift attendants will stop loading passengers onto the lifts immediately.
- The chairlifts will increase to the maximum speed possible enabling unloading of passengers as quickly as possible. They will then be stopped and staff will move people to higher ground.
- All surface lifts will stop (t-bars, platters and tow ropes). Lift attendants will clear loading areas of people and move them to higher ground.
- All buildings are considered to be in safe zones so all those people in buildings should remain indoors.
- Hut Flat, the Rock Garden, Happy Valley and the Top of the Bruce Plaza are all safe zones. If you are in these locations, remain there and await instructions.
- Follow all instructions given by Ski Patrol and Mt Ruapehu staff. All staff members wear clearly marked uniforms.
- Please remember that lahars move along the valley floors so always move to higher ground as quickly as possible.

USEFUL CONTACTS

RUAPEHU ALPINE LIFTS: 07 892 3738
Whakapapa Business Line: 07 892 3410
Turoa Business Line: 06 385 8456
Whakapapa Medical Centre: Dial business line - ext. 847 or 880
Turoa Medical Centre: Dial business line - ext. 675 or 621

DEPARTMENT OF CONSERVATION

Ruapehu Area Office: 07 892 3729
Ohakune Field Centre: 06 385 0010
Emergency Line (24 hours): 0800 362 468

POLICE

National Park Police: 07 892 2869
021 454 627
Ohakune Police: 06 385 0100

RISK ANALYSIS AND MANAGEMENT FORM

BAY OF PLENTY SECONDARY SCHOOLS SKI & SNOWBOARD CHAMPIONSHIPS

<u>UNWANTED EVENTS</u>		
Hypothermia Lost Boarder or Course Assistant Avalanche Lahar Impact injury from hitting ice, rocks or solid objects Death or serious injury from falling Death or serious injury caused by falling objects or people		
<u>CAUSAL FACTORS:</u>		
PEOPLE	EQUIPMENT	ENVIRONMENT
Lack of fitness/health Lack of boarding skill Not following instructions Not listening to instructions Inexperience in mountain environment Unfamiliar with ski field Poor supervision by School Adults Not following the Snow Code Not applying sunblock or top ups Not wearing suitable protective equipment Ignoring signs eg out of bounds/closed areas Lack of appropriate food	Equipment damaged by misuse Loose or unsecured equipment eg runaway board Inadequate clothing	Hard landing surfaces Slippery surfaces Sun glare and reflection off snow Poor weather Poor course selection Poor visibility Wind, rain, low temperature Unstable snow Volcanic eruption Leak from the lake leading to a Lahar
<u>MANAGEMENT STRATEGIES</u>		
PEOPLE	EQUIPMENT	ENVIRONMENT
Issue clear, concise instructions Disclose risks on Consent Form/facebook of not following instructions Ensure adult competency for supervision Pre-trip briefing on clothing, sun protection, sun block (Hand Out) Implement a checking procedure Trail maps and clear directions Use terrain within	Good radio communications: RAL Event Manager to Waikato Organiser to Course Chiefs to Course Staff to Competitors PA System messages to Managers/Competitors Ensure helmets are always worn Direct communication with Mountain Staff Snowsports NZ approved courses Encourage the use of mouth guards, impact shorts, impact	Regular course maintenance Contingency Plan if weather deteriorates Use updated Met Service Reports Eliminate hazards All features on the Terrain Park have suitable run offs Modified kickers are provided for girls on the Slope Style Course Call on Weather and Snow Conditions made by RAL Ltd staff. Evacuation Plan for poor

<p>comfort zone Use specialist Mountain Staff Have local contact details for all teams Follow the Mountain Code of Conduct Buddy new people with regulars Phone tree of all Managers – keep in touch via Texts Managers to have Phone Trees with Competitors Schools to send Two Adults: one deals with injured student, other supervises remainder Supervise Practice Sessions eg Terrain Park</p>	<p>vests All courses fenced off from the public All Course Assistants wear high visibility vests</p>	<p>visibility/high winds. Collect competitors and Course assistants and descend together through the race course, at pace of the slowest person. Regroup at Giant Café then descend to Base area by travelling under the Chair Lift Towers. Use phone texts to Managers who in turn text their team members.</p>
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<p>EMERGENCY PROCEDURES</p>	<p>Ski Patrol Mountain Doctor Ambulance Rescue Helicopter Lahar & Volcanic Eruption Warning Siren Fog Horn mounted on Lifts for White Outs</p>
<p>POLICIES AND GUIDELINES List relevant Industry Standards and policy guidelines</p>	<p>Snowsports NZ approved Terrain Courses/BX/GS courses Teachers and parents must role model safe practices at all times – see RAL website Snow Code Safety approved Helmets must be worn at all times when competing Competitions not held in high wind or extreme weather conditions – RAL make the call.</p>
<p>Staff skills;</p>	<p>Risk Management Group Management First Aid</p>

RISK ANALYSIS AND MANAGEMENT SYSTEM

SITUATION: VISIT TO MT RUAPEHU SKI AREAS



Undesired Events	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Journey to Mt Ruapehu</th> <th style="width: 50%;">At Mt Ruapehu</th> </tr> </thead> <tbody> <tr> <td>Vehicle breakdown Traffic accident Forgetting equipment</td> <td>Illness of child or supervisor Student homesick Student separated from group Theft of personal property Loss of equipment Breakage of equipment Fatigue Ski / Board injury Snow blindness Severe cold or Hypothermia Death</td> </tr> </tbody> </table>	Journey to Mt Ruapehu	At Mt Ruapehu	Vehicle breakdown Traffic accident Forgetting equipment	Illness of child or supervisor Student homesick Student separated from group Theft of personal property Loss of equipment Breakage of equipment Fatigue Ski / Board injury Snow blindness Severe cold or Hypothermia Death								
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Relevant Industry Standards Applicable	Land Transport Safety Authority Vehicle Licensing Regulations Land Transport Safety Authority Driver Regulations Occupational Health and Safety Act												
Policies and Recommended Guidelines	All participants complete a medical form prior to trip, which can be left with the respective Accident and Medical Centre for the duration of the visit Supervisory staff have first aid training First Aid kit carried at all times Organisers make adequate planning and gather as much information as possible before arrival Carry out daily checks on equipment Check weather and snow reports before coming up to the ski field Maintain control and communication by having the correct ratio of supervisors to students												
Skills Required by Staff	Good group management and facilitation skills Risk management awareness Good level of fitness Current First Aid qualification												