

RISK ANALYSIS AND MANAGEMENT SYSTEM

FOR: CAVING

LAST UPDATED:

4/1/2018 BWR operations supervisor

ANALYSIS

DESCRIPTION

UNDESIREDEVENTS	OUTSIDE-CAVE		
	Accident on way to cave	Leaving equipment behind	
	Late start to activity		
	Stolen property		
	IN CAVE		
	Severe Cold or Hypothermia	Light failure	
	Drowning	Injury from equipment failure	
	Psychological distress	Caught in flood	
	Claustrophobia	Overdue	
	Damage to equipment	Trapped in squeeze	
Damage to environment	Injury from tripping or falling		
Party member lost or whole of party lost	Medical emergency/allergic reaction		
Injury from falling person or object	Party fatigue		
Stuck on ladder/abseil			
CAUSALFACTOR	PEOPLE	EQUIPMENT	ENVIRONMENT
	OUTSIDE-CAVE		
	Unskilled drivers	Poor vehicle maintenance	Busy rural roads
	Overseas drivers	Incorrect equipment for cave	Multiple hazards on road
	Lack of adequate planing	No equipment check sheet	Wet or hazardous conditions on road
	Poor cave match for group		
	IN CAVE		
	Unfit people in the group	Unsuitable group equipment	Cold
	Peer pressure	Lack of food/hot drinks	Wet
	Poor communication	Poorly maintained equipment	Slippery surfaces
Pre-existing medical conditions	Lack of emergency equipment	Loose rocks	
Poor understanding of activity		Confined spaces	
Poor risk management practise		Heavy Rainfall	
Untrained staff		Darkness	
Lack of site knowledge		Deep Water	
RISKMANAGEMENTSTRATEGIES	NORMAL OPERATIONS		
	OUTSIDE-CAVE		
	Guides to have correct license for vehicle they are using	Ensure vehicle maintenance is done and vehicle is checked before use	Drive for the conditions at the time, slow down in the wet
	Drive defensively		
	Plan appropriate trip for group	Pack correct equipment for cave (see appropriate folder)	Check weather before using cave
	Obtain group information before hand	Ensure First Aid Kit in vehicle	
	IN CAVE		
	Experienced staff with site training	Equipment cleaned and serviced between trips	Choose safest route
	Analysis of accident/incidents for staff training and site management	Equipment logged after trips	Protect areas of high risk from damage
	Disclose activity risk	IN CAVE	Protect clients if exposed to any areas of high risk
Active management of group safety during activity	Carry First Aid Kit at all times	Check water gauges	
	Clients issued with any specialised clothing or equipment required for cave		
	Checks of rigging or other equipment during use		
EMERGENCY			
First aid kit to be carried on all trips	Communication with base either via cell phone or land line		
Hot drink and food to be available on all trips			

RELEVANT INDUSTRY STANDARDS APPLICABLE	Land Transport Safety Authority vehicle licensing regulations Land Transport Safety Authority driver regulations Occupational Safety and Health Act NZ Outdoor Instructors Association cave syllabus NZ Speleological Association caver guidelines Black Water Rafting staff training manual NZ Qualification Authority unit standards		
POLICIES AND RECOMMENDED GUIDELINES	All staff to have current first aid certificates All clients/ students to fill out medical form before partaking in activity Cancel trips where there is a defined risk from flooding or the water is over specific operating levels during bad weather Appropriate ratios for group management Staff and clients to wear all supplied PPE		
SKILLS REQUIRED BY STAFF	Good group management and facilitation skills Risk and crisis management skills Site specific training Knowledge of company policy and procedure Site specific rescue procedures Good level of fitness		
TRIP SPECIFIC RISK MANAGEMENT REQUIREMENTS (helmet & light supplied for all adventure activities)	BLACK LABYRINTH	BLACK ABYSS	BLACK ODYSSEY
	Ratio 1:8 12 years and 45kg min 55cm limit on water gauge Cold Deep water Wetsuits supplied Sturdy footwear supplied Thermal top supplied	Ratio 2:1 to the Ledge, 1:8 for streamway passages (This includes dry passages) 16 years and 45kg min 55cm limit on water gauge Cold Abseiling Deep water Wetsuits supplied Sturdy footwear supplied Thermal top supplied Harness/connectors supplied NB: Abyss can also be run as a top-rope abseil, 1:1 ratio	2:6 (1:2 after client evaluation, and until abseil only) 16 years and 45kg min/ 100kg max Must pass Fit test & breathalyser Lack of client comprehension requires more stringent risk disclosure Direct guide supervision required at the start/finish of traverse lines Climbing/traversing Abseiling Harnesses with self-locking karabiners (Clickits) supplied