

### Safety Management Plan: Friends of Flora

<b>Reporting line:</b>	Motueka Operations Manager	<b>Site:</b>	Conservation Land	<b>Location:</b>	Kahurangi National Park
<b>Person Responsible:</b>	Ranger Biodiversity (Ivan Rogers)	<b>Start Date:</b>	1 March 2020	<b>Review Date:</b>	30/6/21
<b>Description of Work:</b>	Predator control and other conservation related work.				

Approval Signatures:		
Person Responsible: Ivan Rogers	Signed	Date
Motueka Operations Manager	Signed	Date

All FOF volunteers will confirm that they have read and understand this plan via the FOF CMS.

### Hazard Management

Hazard Title	Hazard Description	Hazard Controls	Local Controls	Minimum Competency
Adverse weather	Wind, cold, rain, lightning storm, hail. Hypothermia. Dehydration. Becoming disoriented and getting lost	Team leader obtain weather forecast prior to monitoring day and weather conditions must be monitored frequently. Wear appropriate clothing for the weather conditions, e.g. rain jacket and other wet weather gear. Carry extra dry, warm clothing. Avoid going out in very high winds. In high/moderate winds and snowfalls be aware of potential windfalls and do not linger under high canopies. Avoid working in open terrain when caught in a lightning storm. In heavy rain be aware of the risk of rising river levels and being cut off from your exit point. Be prepared to stop work and retreat or seek shelter if conditions become dangerous. Minimise exposure to cold/wet/hot conditions. Carry first aid kits and adequate communication.	Be particularly careful scheduling June and July work as early onset of darkness exacerbates hazards	
Pest/predator control - traps	Trap closing on operator	Traps to be well maintained and damaged traps repaired or discarded. Have radio in easy reach in case of emergency. Volunteers to carry personal first aid kits and ensure any wound is cleaned and treated appropriately. Avoid distractions whilst	Anyone not trained must be trained or accompanied by a competent person such as the group	Training of all people operating traps showing them how to hold and set to minimise accidental triggering and use safety

		handling traps. Place new baits prior to re-setting double trap/s.	leader.	catches.
Trap Handling	Trap welds fracturing from shock/stress when resetting, causing injury.	Carefully check any sprung traps for broken welds before they are reset.	Take particular care with traps exposed over winter	Ensure all leaders have fully informed all volunteers in the field.
Dead animal handling	Contracting diseases from dead animals such as leptospirosis, often present in rat urine and transferred to humans via mucus membranes (eyes, mouth) and open cuts/sores. TB from dead possums	Wear gloves or use tongs if handling dead animals. Cover broken skin beforehand. Thoroughly scrub hands with an antibacterial wash or cloth prior to eating or at the end of the day. Seek medical advice if feeling unwell after handling dead animals.		Receive briefing from leader or other competent/experienced person
LPG use	Working around or using LPG cylinders including supply lines. Explosion, leaking and physical damage to cylinder and valve. Gas leakage. Asphyxiation. Lifting. Heavy object falling.	Secure cylinders correctly when transporting to prevent movement and damage. Cylinders in upright position with valve closed. If investigating suspected gas leak, extinguish all flame first. Check valve on cylinder is closed before disconnecting pipe. Check rubber sealing washer is in positions. Check for leaks using soapy water on all joins and connections. Check any flexible hose for signs of age or cracking. Leather gloves to be worn when changing bottles. Any area that is affected by gas leakage must be cleared of gas before it can be entered safely. Never use appliances in confined spaces. Ensure gas appliances supervised at all times when in use. LPG cylinders not be transported with passengers in helicopters.	Particularly important when using LPG at Deep Creek or Grecian bivy.	
Fire	Portable cookers have potential to cause fires if knocked over or plant material ignited.	Exercise caution if using gas or spirit cookers outside. Use hut fireplaces and fire pits where provided.	Complete fire prohibition will be shown through DOC signage.	

River Crossings	Deep water, holes, slippery rocks, fast/large rivers. Drowning. Uneven ground, rocks, banks on river beds	When river swollen or in flood, do not cross. Consider river conditions, holes, slippery rocks and run out zone. Where practical site camps and work on the same side of the river. IF swept over in river keep legs up and travel feet first. Take appropriate action to prevent hypothermia in the event of flipping or falling during a river crossing. Check weather forecasts. Use appropriate and correct clothing and footwear. Ensure fitness levels good. Use poles where required.	Inexperienced volunteers must cross rivers under the guidance of a competent person.	Trained/competent in river crossings
Manual handling	Sprains and strains. Crushing. Slips, twisting, compression.	Stress the need for people to take care and appropriate amount of time while carrying out tasks. Make sure volunteers are suited to the tasks and do not have serious disabilities. Recommended Maximum of 2 doubleset boxes to be carried on back at one time.	Utilise pack frames for carrying traps	Reinforce the need for good lifting techniques.
4WD Use	Collision/lose control of vehicle. Road edge breaking, rolling while driving on rough/steep or unstable or steep terrain. Driving under areas of loose and falling rock(vehicle swept off track, crushed, buried). Stall when ascending or descending a steep hill. Becoming immobilised in an isolated location or accident from loss of control. Moving equipment inside of vehicle could cause injury. Fatigue. Vehicle rolling away when parked and hitting objects or people. Collision with trampers or mountain bikers. Getting stuck in the Flora if gate blocked by parked cars,	Select suitable vehicle and do not exceed capabilities of that vehicle. Seatbelts to be worn at all times. Keep body parts in cab while driving off road. Secure loose gear that is inside the cab or on vehicle deck to avoid injury to occupants and damage. Tyres are fit for the purpose and regularly checked. Avoid using trailers off road. If towing is necessary take extra care. If parking vehicle on any sort of slope apply handbrake and engage 1 <sup>st</sup> or reverse gear as well turning wheels uphill or away from road edge.  Flora Road suitable for daytime use only.  Check vehicles for tampering, particularly of wheel nuts and external hydraulic hoses, on return.  Avoid distractions whilst driving.	Team members not to drive on off-road tracks until trained and competent. Must have read and signed DOC Safe Driving SOP and produced license and been assessed by DOC staff or DOC trained driver eg Robin Toy before driving DOC 4WD along Flora Rd. Driver of DOC vehicles must 'fob on'.  Lights on at all times on Flora Rd.	Experienced, or with someone who is. All volunteers who are using a 4WD off road to successfully complete a 4WD off- road course.

	Encountering other vehicles head-on.		<p>Radio to alert other users of the Flora Rd before proceeding in either direction.</p> <p>Flora Rd. not to be driven on after dark. Place road cones at Flora carpark gate entrance during busy periods to ensure exit.</p> <p>Unless you have a passenger to do it for you, stop when checking trap numbers etc.</p> <p>Unless changing gear, keep both hands on the steering wheel at all times.</p>	
Bush – travelling through	Pushing through rough or prickly vegetation – fall onto sharp sticks causing puncture wounds.	Consider wearing tough or protective clothing over parts of body vulnerable to puncture wounds. Watch for any objects that you may fall over. Beware of overhanging branches or dead stems hitting head, face or eyes of yourself or others. Keep safe following distance.		
Travelling, land	Negotiating steep terrain. Weather extremes – hot/cold/dry/wind/storms /whiteout/snowfall/ice/	Where possible avoid working or travelling across steep areas where there is a high risk of fall. Each leader must fill in intentions book at Flora car park before and after each day and carry a full current first aid kit.	VHF radio and/or PLB must be carried close to body in case volunteer	<p>Personal fitness must be appropriate to tasks performed.</p> <p>Competent in use of radio</p>

	heavy rain. Falling or sustaining injury while carrying pack/gear. Avalanches in steep terrain, land movements/slips. Windfall/logs/spurs/rocks. Negotiating terrain in the dark. Getting lost. Pre-existing medical condition.	Wear appropriate footwear. Carry food and water. Leaders to check if any medical conditions amongst volunteers and they have medication required. Team leader must carry a 1 <sup>st</sup> aid kit and radio and be familiar with their use. Always leave intended route with a responsible person and your ETA. Leader to complete a FOF safety briefing prior to activity and identify/mitigate any hazards. If you suspect you are becoming lost or overdue, or require assistance, radio for help. Always carry a torch in case of an unexpected delay in returning.	separated from pack. Radios to be on at all times. If working in multiple locations have regular radio scheds.  GPS units if off-track or trapline.	and GPS if necessary.
Travelling, snow,ice	Snow sitting on top of tussock/ obscuring gullies in tracks leading to falls when volunteer breaks through crust. – Ice on exposed sections of track or trap line	Avoid trap checks at times when snow settled on tussock. Do not drive if not competent driving in snow/ icy conditions. .	Team leaders to schedule trap checks factoring in conditions. Whisky Creek bend is especially hazardous in icy conditions	Competent in reading forecasts, use of CMS
Sun exposure	Exposure to direct sunlight/UV radiation	Volunteers working in sunny conditions to use appropriate gear and clothing i.e. sunglasses and sunhat with neck and ear protection and sunscreen.	Particularly relevant for work above the bushline.	Educated in UV exposure
Not drinking enough water	Dehydration	Carry sufficient water at all times. Be aware that some lines and areas of operationa have no running water.		
Wasp, insect stings, tree nettle	Allergic reaction, anaphylactic shock etc.	Specific prescribed anti-histamines to be carried by any individuals with a known history of allergic reaction. Use caution near any wasp nests or tree nettle bushes and stay away from them When checking traps having wasp activity avoid antagonising them when handling - or bypass such traps. Ensure med kits have Zyrtec or equivalent tablets in the case of stings.	Zyrtec or equivalent tablets to be carried and team leaders to check volunteers for allergies. Inform team leader or Mot base of multiple stings.	Team leaders inform and check with other team members. All team leaders to have up to date first aid training.
Handtool use	Use of variety of handtools including manual/electric screwdrivers, hammer, grubber etd. Heavy	Recommended relevant Personal Protection Equipment includes gloves, safety boots, overalls, leg protection, protective glasses if considered necessary. Be aware of the location of others and work at least 3 metres apart. Correct sharpening	Check your grubber handle for wear and tear.	Competent in use

	objects. Flying objects. Extended use (loss of control). Sharp blades/objects. Impacts. Entanglement. Public access.	procedure used and tools maintained regularly. Check for loose heads on axes, grubbers etc.		
Working alone	Injury, lack of assistance and/or treatment, hypothermia	Always leave intended route with a responsible person and your ETA. Ideally carry at least 2 communications devices (radio and PLB).	Ensure a responsible person knows your route and ETA as per fridge magnet	Competent to work alone
Hunters in the vicinity	Working in the vicinity of recreational hunters and others – mistaken ID by hunter – accidental shooting.	Wear hi-vis clothing whenever in the field. Carry hand held radio/PLB.	Extra awareness during the roar (March to May). Use FOF Hi-vis uniform items provided. Signs warning hunters of staff and volunteers working off-track have been installed.	
Helicopter use	Crash. Hit by objects. Dust. Rotorwash. Rotor strike. Slips and trips from exiting. Difficult terrain. Noise. Adverse weather. Loose objects downing helicopter.	Follow pilots instructions and briefing at all times, including for alighting and disembarking. Internal loading including number of people to be carried, taking account of pilot experience and helicopter type/ power, to be agreed before take off. Only essential staff to be near machine. Make eye/voice contact with pilot before approaching chopper. Do not go around the back of a chopper. Wear hard hats as appropriate (with permanent chin straps) and fire resistant clothing if applicable. Always use hearing protections (Grade 5) if working around helicopter. Headsets must be worn inside machine. Have a designated site controller. If transporting external load only staff essential to unloading to be carried. Agree on entry/exit but abort if too hazardous. Wear good tight fitting lace-up boots.	Team members to be briefed on proper safety procedures prior to working around helicopters. New or inexperienced volunteers to be paired up with an experienced person and follow their instructions	Instruction (induction, briefing, hazard disclosure) on working with helicopters. Competent team leader assigned.

		Wear hi- viz. LPG cylinders not to be transported with passengers in helicopters. Secure all loose objects.		
Helicopter – Underslung Loads	People getting clothing etc attached to loads. Injury through swinging loads.	Follow pilots instructions and briefings at all times. Maintain radio coms with pilot. PPE to be used. No loose clothing or hats to be worn	Training provided br Helicopters Nelson	Person to be deemed competent when dealing with external loads. Team leader to ensure that this is the case for all staff involved
Bird and wildlife monitoring	Harm from catching equipment/techniques. Infection/disease from bird bites, scratches & punctures. Psittacosis, salmonella etc can be inhaled.	Hands washed with anti-bacterial soap after handling birds and reptiles. All wounds cleaned immediately. Personal first aid kit to be carried. Ensure volunteers are familiar with the animals encountered and their habits. Wet wipes/ waterless soap etc to be carried. If diseases are suspected, seek medical advice.	Wash hands before eating after handling tracking tunnel cards.	Trained in techniques and equipment use prior to undertaking catching or telemetry work..
Night Work	Slipping and falling. Lost.	Carry torch, spare bulb and batteries. Carry communication, i.e. radio and GPS. Assess the area during daylight hours first, for obstacles or hazards which may be hard to see at night, such as holes, falling debris. Night routes can be marked with reflectorized tape on clothes pegs. Be well equipped with warm clothing.	Volunteers to always undertake night work under the leadership of a competent person	Competent person
Radio telemetry	Electrocution from lightening strike, arm/shoulder strain, injury of worker from aerial. Ear discomfort from interference when using earpiece.	Be aware of weather conditions and cease telemetry if electrical storms threaten. If lightening is imminent disconnect aerial and place it on the ground then move to an open space. Be aware of proximity of others when using aerial. Alternate arms if arms/shoulders tire during telemetry.		User made aware of hazards and methods of control – like keeping assistant 1.5m from aerial and using lowest practicable volume especially when using earpiece
Emergency communication – cell phones	Inability to make cellphone connection	Do not rely on cellphones as a means of communication due to very limited coverage. Carry a radio and know how to use it. cellular contact can be made only when in line of site to Mt Cambell or Nelson	Ensure a responsible person has your ETA. Provide this person with the Channel 5 repeater phone number 03 5281813 Radio interconnect (DTMF) function	Practise DTMF function

			instructions on laminated card in each radio bag.	
Injury occurring in remote areas	Inability to deliver first aid to accident victim	Ensure first aid kit is carried by a member of the volunteer group.	Ideally all FOF volunteers to have a current outdoor first aid qualification.	
Stress	Stress resulting in ill health or poor decisions arising from pressure or perceived pressure to complete a task.	A culture of openness where exchange of views is appreciated and accepted. All volunteers to speak out if they feel that any task is unreasonable or unsafe	All volunteers look out for signs of stress in their colleagues and discuss at first opportunity.	Team leader check that team members are comfortable with their tasks

<b>General Comments on Health and Safety Plan</b>	<b>Relevant Documents</b>
The Operations Manager must be notified of any accidents or emergencies as soon as possible	Incident report
<b>Emergency Plan</b>	<b>Emergency Contacts</b>
<p>Emergency protocols covering overdue solo and group persons are outlined in the FOF Field Guide.</p> <p>Each volunteer to inform a responsible person before going into the park.</p> <p>Each team leader will arrange a daily check-in time with a contact person before going into the park. If no contact has been made 2 hours after the nominated check-in time a search will be initiated.</p> <p>Each Team Leader will fill in the details of all team members in the visitors book at the Flora car park and again at time of departure.</p> <p>If a volunteer is seriously injured and outside assistance is required contact Mot base or Nelson VC. If neither are available a PLB should be activated or a 111 call should be made.</p>	<p>DOC Motueka Area Office (03) 528 1810</p> <p>Nelson Visitors Centre (03) 546 9339</p> <p>Emergency Services 111</p> <p>Phone number of designated contact person.</p> <p>Channel 5 repeater can be called from any phone anywhere to contact anyone with a VHF radio no Channel 5. Ph (03) 5281813</p>