Castle Hill Basin Community Response Plan

July 2021

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Introduction

This is the Community Response Plan for Castle Hill Basin. Although with an Alpine Fault earthquake event in mind, this plan is applicable to other emergency events.

While we can't predict when emergency events will happen and what they will look like, we can prepare for their impacts. These impacts can include isolation from broken roads and landslips, no power, no communication, no water, food, and other supplies. It may also include evacuations and dealing with casualties.

This plan is to be reviewed every two years.

The Alpine Fault

The Alpine Fault is estimated to regularly produce an approximately Magnitude 8+ earthquake, with a statistical return rate of 300 years, the last such quake being 300 years ago. Scientists have calculated the probability of a large (M8+) earthquake in the next 50 years at 50%.

An Alpine Fault earthquake will likely see Castle Hill cut off from the outside world for an extended period of time and without services like power, water and phone. There is likely to be secondary hazards such as landslips and significant aftershocks.

You may be isolated for 2 – 4 weeks, possibly longer. There may be no power for 2 - 4 weeks. Roads and bridges may be damaged for some time and food and fuel supplies will run out. Help may be some time away so you need to be prepared for a long and difficult time being isolated.

Other hazards

Other emergency events that may impact Castle Hill include severe weather, snow, landslides, fire, and non-natural hazards such as infrastructure failures or Road Traffic Accidents (RTA's).

Geographic boundaries

This plan is designed to cover Castle Hill Basin, from Porters Pass to the bluffs past Cass, with the Village being the main community focus. It includes Lake Lyndon Lodge, high country stations and the four ski fields in the area, Mount Cheeseman, Porters, Broken River, and Craigieburn.

Support may come from, or be needed by, neighbours such as Arthur's Pass and Lake Coleridge. While Cora Lynn Station and the Wilderness Lodge fall within the boundaries of the Arthur's Pass Community Response Plan, it may not be possible for Arthur's Pass community to access these areas.

Community

Castle Hill Village is 33km west from Springfield over Porters Pass. There are approximately 10+ permanent residents in Castle Hill village. There are 175 homes in the Village and during weekends and school holidays the population can swell significantly.

At Flock Hill Station there can be between 15 – 100 staff and guests. Grasmere Lodge is currently closed, however there are 3 - 5 people resident.

Alistair Sidey Mountain Lodge (St Andrew's College Lodge) hosts school children for camps and is located at the end of Castle Hill Drive. It can accommodate approximately 40 personnel. The Environmental Education Centre off Broken River ski field road accommodates up to 34 personnel. The Cheeseman Ski Club's Forest Lodge may also have up to 30 guests. The Combined Tramping Clubs Lodge at Lake Lyndon may have up to 20 personnel present.

Other facilities and locations to note include Mt White Station, Craigieburn Station, Avoca, Flock Hill Station, Flockburn and Ski Touring Club buildings at Jacks Pass and private baches at Craigieburn Ski Area and Lake Pearson. Grasmere also has six or seven private houses. In Cass there are three houses with up to five people.

At any one time a range of people may be passing through Castle Hill. These include walkers, skiers, mountain bikers, day visitors, climbers, campervans, and campers. In summer numbers of people passing through daily on SH73 are estimated to be about 1000, and in winter up to 2000. Although these numbers are approximate, it indicates that potentially large numbers of people could be passing through the area with limited supplies. These people may get trapped on the roads or surrounding areas.

There is a popular 594 metre-long walk-through cave within Cave Stream Scenic Reserve. The carpark can have over 70 cars present. At Castle Hill boulders there can be approximately 80 cars and over 200 people visiting.

St Andrews Outdoor Education Centre

St Andrews have kindly offered the Village the use of their facilities in the Village as well as their Outdoor Education Centre in a major emergency. The use of the Outdoor Education Centre will depend upon the Thomas River bridge being intact and safely passable. There are approximately 40 beds available. The Outdoor Education Centre is well appointed with a large diesel supply, 240V diesel generator and a diesel-fired boiler.

The Centre contains a kitchen and pantry designed to cater for up to 50 personnel.

The dining/lounge area contains a large log burner and there is a substantial supply of firewood.

Fire-fighting ability is significant, with recent upgrades to the water supply and connectivity to the two Fire Master fire pumps which negates the need to prime the pumps. Any fire may initially need to be handled by Village fire-fighters as first responders. One fire pump, hoses, nozzle, etc., is located in the Boiler Room while the other pump, hoses, nozzle is in the Storage shed at the western end of the Lodge. There are two sources of water for fire suppression, one at each end of the Lodge. These sources couple directly to the fire pumps and only need to be turned on at the tank supply without the need for priming the pumps.

The St Andrews fire-fighting equipment has recently been made compatible with the Village fire-fighting equipment, such that the parties can support each other in the event of a fire.

The facilities in the Village include a 3-bedroom home, also well fitted out, again with log burner and beds. There are several radios in the home for establishing contact with St Andrews personnel in Christchurch.

Should access to any of St Andrews facilities be required, there is a key for most facilities in the Village CRT ICP which can only be accessed by CRT personnel.

Castle Hill Strengths, Weaknesses, Opportunities, Threats analysis

Strengths	**Weaknesses**
• A community generator and fuel. • A village hall for use as an emergency centre, with log burner. • An Incident Control Point (ICP) has been established containing emergency equipment. • An emergency radio in the ICP for direct communication with SDC Civil Defence Management in Rolleston. • Four CB type hand-held radios for contact between CRT personnel. • First aid supplies with trained people, and at times medical personnel. • A satellite phone. • Food supplies and bedding in the ICP and hall. • Access to unoccupied homes for food and bedding by arrangement. • Defibrillator at the ICP. • Strong Community Response Team. • Strong fire-fighting capability with trained fire-fighters and high pressure hydrants throughout the Village.	• Limited cell phone reception in Castle Hill basin. • Limited communication between Castle Hill Village and the high country stations. • Some homes rely on electricity for heating in winter. • Some have families in Christchurch which may cause stress if communications are limited. • Some people may want to get out fast. • There are no commercial shops in the village for food or fuel. • Holiday home renters may have limited food supplies with them. • Large numbers of tourists with limited supplies and knowledge of the area.
Opportunities	**Threats**
• It is possible that the Lyndon Road could be used to access Lake Coleridge. This road could have some landslips and could be dangerous in winter, however may be more accessible than SH73. There are several one-lane bridges that are likely to fail structurally.	• Landslips and impassable roads and bridges. • Fuel may be in short supply. • Alpine weather conditions. • Large numbers of overwhelmed tourists. • Serious Road Traffic Accidents.

Alpine Fault Standard Operating Procedure for Castle Hill

1. Immediately after an earthquake, check yourselves and your family.

2. Set up a Civil Defence Emergency Centre as support to SDC EOC.

3. Check your community to identify major problems including numbers of people injured/trapped/deceased (including travellers on roads).

4. Establish triage and first aid facilities using local skills and resources.

5. Do a stocktake of critical resources (food, water, medical supplies, shelter etc.).

6. Once this is complete, contact SDC EOC and provide a situation report including what urgent help is required.

7. Continue to provide reassurance, advice, and accommodation if needed.

8. Record names and details of those who need assistance.

Expect to feel aftershocks.

Damaged buildings may collapse in aftershocks.

Communication

NB: The community is working on their own communication options between the village and high country stations and will update this plan as it progresses.

In the first few hours after a major event the Selwyn EOC will be being set up and won't be fully operational. The EOC won't have situational awareness. There is no point attempting to immediately contact the EOC after a large event. First, establish the situation in your own community, so that when you get in touch with the EOC you can provide a summary of accurate and useful information.

If you are operating on emergency power, suggest a communications schedule to the EOC, so that you don't have to keep the generator on all the time. This could be every one, two, six, 12 or 24 hours, depending on what is happening in your community.

To contact the EOC try the numbers listed below in the order they are listed:

1. **EOC main phone number – Restricted**
   Once the EOC has been set up it will become the main phone number. ***Do NOT give this number to the public or media. They should be given the main council number of 03 347 2800.***

2. **EOC Intelligence Team – Restricted**
   This won't be answered until the EOC has been set up.

3. **The Duty Emergency Management Officer (EMO) number is Restricted** and is monitored 24/7 by either Al Lawn (Civil Defence Manager), Sue Jenkins (Community Resilience Coordinator) or Jason Flewellen (Emergency Management Officer).

4. **SDC VHF radio – channel 9 SDC-R**
   Call the EOC on the radio. Your call sign is Castle Hill CRT. The EOC call sign is Selwyn EOC. When calling use correct radio procedure. To call the EOC say "Selwyn EOC, Selwyn EOC, this is Castle Hill CRT over".

5. **DOC VHF radio channels**
   The Selwyn radio is also programmed with Department of Conservation radio channels. You could try calling DOC on these and ask them to pass a message to the Selwyn EOC. The most likely channels are DOC Mt Oxford or DOC Kelly's Hill. Selwyn EOC will try to monitor the DOC network.

There is a satellite phone in the ICP in plastic container on interior south wall.

The Castle Hill SATPHONE number is 0061 452 650 580.

SDC CDEM1 - 0061 Restricted

SDC CDEM2 - 0061 Restricted

SATPHONE TO SATPHONE – dial satphone number (e.g. 0061 Restricted)

SATPHONE TO LANDLINE – dial 0064 then area code without the 0 prefix (e.g. 0064 3 Restricted)

SATPHONE TO CELLPHONE – dial 0064 then cell phone number without the 0 prefix (e.g. 0064 27 Restricted)

LANDLINE TO SATPHONE – dial satphone number (e.g. 0061 Restricted)

CELLPHONE TO SATPHONE – dial satphone number (e.g. 0061 Restricted)

Restricted phone numbers are only accessed via the CRT Leader or Deputy CRT Leader.

Current Designated Personnel

Although we don't know who will be in the Castle Hill area when an emergency happens, and others will have to step up, there are some people with strong knowledge of this plan and response processes.

Community Response Team Leader: Dick Moore

Deputy CRT Leader: Ray Goldring

Fire Control Coordinator: Dick Moore

Communications Officer: Liz Hay

Welfare Officer: Maree Goldring

Street Coordinators: Ron Hay, Lin Moore, Liz Dart, John Reid, Iohangawai Te Pahi

(or others appointed on the day)

Checking buildings after an earthquake

Be aware that electricity supply could be cut, and fire alarms and sprinkler systems can go off in buildings during an earthquake even if there is no fire. Check for, and extinguish, small fires.

If you are in a damaged building, try to get outside and find a safe, open place. Watch out for fallen power lines or broken gas lines, and stay out of damaged areas.

If you smell gas or hear a blowing or hissing noise, open a window, get everyone out quickly and turn off the gas if you can. If you see sparks, broken wires or evidence of electrical system damage, turn off the electricity at the main fuse box if it is safe to do so.

Facilities

In an emergency the main facility where the community can gather is the Castle Hill Community Hall. The hall has a fully equipped kitchen, large 6-burner BBQ, large diesel generator, and log burner. The generator key is located in the ICP on interior west wall. The radio is in the ICP.

First aid kits and emergency food are located in the ICP. Civil Defence materials (pens, hi-vis vests, signs etc.) are in a plastic box in the ICP. Bedding is located in the hall loft.

Evacuations

In a large earthquake. visitors (and possibly residents) may need to be evacuated out of the area by air or road.

Priority for evacuations:

- Trauma or medical
- Non-residents with limited supplies, such as tourists or motorists
- Residents

Evacuees may only be able to take one day bag and should pack identification, important documents including insurance papers, wallet, any medication, and some clothing.

If your property is damaged, take notes and photographs for insurance purposes. If you are renting, contact your landlord and your contents insurance company as soon as reasonably possible.

Accommodation

If accommodation and beds are required there are options within the community, including spare rooms and rental properties. There is bedding in the community hall.

First aid supplies

There is a defibrillator at the ICP in an external unlocked cabinet. First aid supplies are in the ICP.

Water

Water supplies may be disrupted or unsafe to drink. Boil ALL water for one minute. There is a 1100 litre emergency water tank beside the village hall. The key for water tank and hose connection is located on interior west wall of ICP.

Food

Eat food first from fridges followed by freezers, and then non-perishable foods. Open the fridge/freezer as little as possible to retain the cold temperature inside. Blankets can be used to cover a fridge/freezer to retain the cold. If generators are going to be used to keep fridges or freezers cold, combine food so fewer generators are used.

There are numerous gas barbecues in the village, as well as log fires for cooking. Outdoor fires for cooking or comfort need to be managed carefully due to fire risk.

Generators and gas

The diesel generator is situated next to the community hall. Instructions for using it are located below the hall mains switchboard door, also taped to the switch-box under the generator lid and a copy on a whiteboard in the ICP.

Spare fuel (160 litres) is in the ICP. Other diesel supplies (40 litres) are stored at a private property and is accessible through the CRT.

There are also other generators within the community. See information about how to use generators safely.

Using generators safely – Orion advice

Sourced from: www.oriongroup.co.nz/safety/using-generators-safely

Portable generators

Portable generators can be easily moved from site-to-site and are not intended to be connected directly to your home mains electrical system. You should only use them to supply appliances through flexible cords.

You must never:

- attempt to connect your generator to your mains switchboard, a wall outlet or by altering your house wiring. This could feed electricity back into our network and risk the lives of line workers

- connect loads that exceed the generator's maximum output rating. Most generators have a maximum rating in watts, for example 2000 watts (two kilowatts)
- use a generator indoors. You risk carbon monoxide poisoning from the fumes and also risk causing a fire
- add fuel to the generator while it is running
- use damaged leads or appliances. You should also use a safety switch designed especially for generators
- connect all appliances at the same time; start with the largest and progressively add successive ones up to the generator's maximum output
- 'piggy back' cords - always use a multiple-outlet box with built in load limiters.

Stand-by generators

Standby generators are designed to provide large amounts of power and are typically used in a business or commercial operation. Stand-by generators are connected directly to the businesses electrical system.

Remember:

- a licensed electrician must install the generator and alter the wiring as necessary
- installations have either an automatic or manual changeover switch that disconnects the incoming mains and couples the generator to the installation wiring. This changeover must occur to stop electricity feeding back into our lines and putting the lives of line workers at risk
- connected loads must not exceed the maximum rating of the generator. To limit the load to the maximum load rating of the generator, the installation wiring is split into essential and non-essential sections so that only the essential loads are supplied by the generator
- to make sure that you are not billed for using the generator, the connection must be on the installation side of the energy meter
- generators designed to start automatically in the event of a power cut should be test-run on load at periodic intervals. The best way to ensure that a generator will start and changeover if the mains fails is to turn off the building main switch
- generators should be regularly serviced by a specialist company.

How to turn the gas supply on and off

Sourced: www.energysafety.govt.nz

- If you are using a gas appliance with an LPG cylinder, you can use the valve on top of the cylinder to stop the gas flow. If you have more than one cylinder, all valves need to be closed to shut off the supply.

- If your home or workplace is supplied from the natural gas network, you can turn the gas off at the meter outside your home. Simply turn the valve on the main pipe from "On" to "Off". You may need a spanner to do this.

- Whenever the supply of gas to your property has been interrupted or appliances that may have been left on, a certifying Gasfitter must be involved in turning the gas on as the piping system might have been filled with air or appliances may have been left on. The gasfitter is trained to purge the system safely and to ensure appliances with pilot lights have been lit.

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