



# Camp Cooking and Fire

Version 2 (2026)



**EDUCATION  
OUTDOORS**  
NEW ZEALAND

Recreation  
**Aotearoa**  
Te Whai Oranga

# Contents

Introduction .....	2
Potential value of activity .....	2
Planning considerations .....	3
Fire permissions and notifications .....	3
The site .....	4
Fuel selection for stoves.....	4
Participants.....	7
Supervision.....	7
Activity risk management.....	8
Pre-activity .....	8
During activity.....	8
Post-activity .....	9
In the event of an emergency .....	9
Leader competence .....	10
Camp cooking, fire skills and knowledge.....	10
Relevant qualifications .....	10
Resources and equipment.....	11
Participants.....	11
Group.....	11
Leader .....	12
Leave No Trace (LNT) / Environmental protection.....	13
Exemplars .....	13
Further support.....	13

# Introduction

This guide supports activities that involve cooking with stoves or fire, including liquid fuel or gas stoves, gas or wood barbeques, and campfires. These activities may include fire making, campfire experiences, cultural cooking fires and preparing meals outdoors.

Camp cooking and fire making can take place on Department of Conservation (DOC) estate, council campsites, school grounds, or private land. Sites may vary, with or without established facilities, water access, or road access.

This guidance focuses on activities under direct supervision. It may also support indirectly supervised activities, such as solo camp cooking. These activities may be stand-alone or part of a larger activity, such as tramping.

This guidance is specific to camp cooking and fire activities and is designed to be used in conjunction with:

- [General Guidance for Organised Outdoor Activities](#)
- [Camp Cooking and Fires Activities Planning template](#)

## Potential value of activity

Camp cooking and fires can provide:

- learning safe practices for using different styles of camp cooking and fires
- learning different techniques to light and manage fires
- learning about and experiencing cultural cooking such as hāngī or umu
- learning safe cooking skills in an outdoor environment
- learning appropriate management of waste and environmental care of the cooking site
- learning to adapt and change if something does not go to plan
- being part of a team working on a shared challenge like building a fire or cooking a group meal
- the opportunity to be proud of creating a meal in a remote area
- a chance to explore new skills and techniques
- social interaction around a campfire, sharing stories and food
- environmental experiences (clean air, sounds at night, night sky/stars)
- freedom from media, cell phones, and other digital devices, or finding new ways to engage with technology

# Planning considerations

An activity plan helps to maximise an activity's success and minimise risk to participants.

## Fire permissions and notifications

Ensure that there are no local government, landowner, seasonal, or weather-related limitations to lighting a fire, or cooking with an open flame or gas/liquid stove.

- Check whether there are any local fire regulations or fire bans in the area.
- Does your concession allow for lighting fires on DOC land?

Fire and Emergency New Zealand (FENZ) have handy guidance to check whether you can light a fire. It considers the type of fire, location, and weather to give guidance. It will also let you know whether you require a fire permit.

### [FENZ: Can I light a fire?](#)

If camping remotely where there is fire risk, let your local FENZ branch know your location and when you will be there.

If planning a cultural cooking fire such as a hāngī or umu, follow the FENZ safety guidance. You will not need a permit if:

- it is less than 4m<sup>2</sup>
- it is not within 5 metres of anything flammable, including buildings or hedges
- it is supervised while burning
- the fire is extinguished once the stones or other materials reach appropriate cooking temperature, before you start cooking

### [FENZ: Cultural cooking fires](#)

FENZ also provides safety tips and short videos

- For [general campfire safety](#)
- For [gas BBQ, cookers and heaters](#)

[FENZ: fire types, rules and permit requirements](#) provides an overview of permit requirements by fire type.

## The site

Identify a suitable site for lighting a fire or cooking with a stove.

It should be:

- be on level ground, clear of trip hazards
- be clear of all flammable material (including foliage) for at least one metre horizontally and at least three metres vertically
- have a clear unobstructed exit path
- be away from living/sleeping areas
- be away from walking areas

Using an existing fireplace will minimise the environmental impact of an open fire.



**Figure 1:** An open campfire

Gas and liquid fuel stoves need a stable, level base and should not be used inside a

tent or inside a building without adequate ventilation. If cooking inside, the area must be well ventilated to protect from carbon monoxide poisoning.

Consider a water source, hand washing, and toilet facilities when organising your camp cooking area.

Consider the availability of firewood and environmental impact on site. Live trees must not be used. Consider bringing wood if possible.

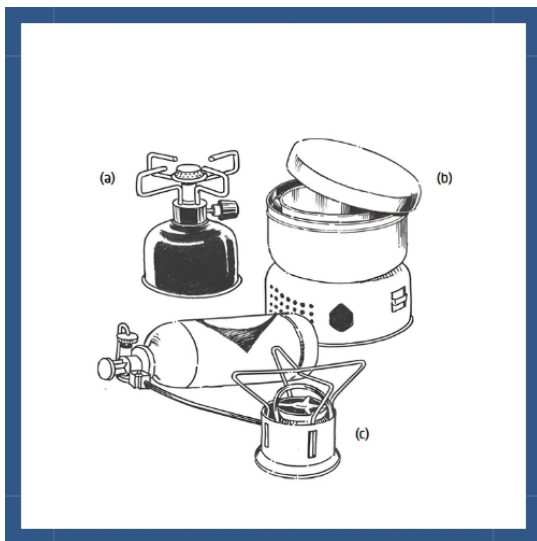
## Fuel selection for stoves

Adapted from: Mountain Safety Council, [Bushcraft Manual](#), pages 68–69.

Fuel type	Pros	Cons
<b>Gas</b> e.g. Kovea canisters	<ul style="list-style-type: none"><li>• Easy to operate – instant ignition</li><li>• Fuel canisters may also be used with lanterns</li><li>• High heat output but requires windshield</li><li>• Lightweight</li><li>• Sometimes self-lighting</li></ul>	<ul style="list-style-type: none"><li>• Fuel is highly flammable</li><li>• Fuel is relatively expensive</li><li>• Fuel canisters on some models can't be detached unless they're empty</li><li>• Empty canisters must be carried out</li><li>• Rubber seal requires maintenance. If it dries out, fitting the</li></ul>

		<p>canister can be dangerous</p> <ul style="list-style-type: none"> <li>• Slow when the canister is cold</li> <li>• Canister can be incorrectly threaded</li> </ul>
<p><b>Liquid fuels</b>  <b>Methylated spirits</b>  <b>(meths or denatured alcohol)</b>  <b>e.g. Trangia stoves</b></p>	<ul style="list-style-type: none"> <li>• Non-pressurised, although they can still flare when very hot</li> <li>• No jet to block and no breakable parts</li> <li>• Easy to ignite in most conditions</li> <li>• Works in the wind</li> <li>• Fuel is easy to identify (dyed purple)</li> <li>• Fuel is easy to get</li> <li>• Should be stored in fuel bottles with safety valve lids</li> <li>• Silent</li> <li>• Meth-burning stoves are the safest of liquid fuels, particularly for beginners, because the fuel is not pressurised</li> </ul>	<ul style="list-style-type: none"> <li>• Difficult to ignite in cold temperatures</li> <li>• Low heat output – uses more fuel</li> <li>• Uses an open fuel bowl (a tipped stove can spread burning fuel)</li> <li>• Flame can be difficult to see, so extra care is needed to ensure it is out</li> </ul>
<p><b>White gas</b>  <b>e.g. White spirits</b>  <b>Fuelite</b>  <b>Shellite</b>  <b>Callite</b>  <b>Britolite</b>  <b>Pegasol</b>  <b>Coleman fuel</b></p>	<ul style="list-style-type: none"> <li>• Spilt fuel evaporates quickly</li> <li>• Efficient with high heat output</li> <li>• Often works in wind</li> <li>• Lightweight</li> </ul>	<ul style="list-style-type: none"> <li>• Fuel is highly flammable</li> <li>• Fuel needs a special container that seals well</li> <li>• Requires priming (pre-heating the burner, turning liquid fuel into gas)</li> <li>• Often noisy</li> <li>• Expensive</li> </ul>
<p><b>Kerosene</b></p>	<ul style="list-style-type: none"> <li>• Fuel is readily available and cheap</li> <li>• High heat output</li> <li>• Modern versions are lightweight</li> </ul>	<ul style="list-style-type: none"> <li>• Spilt fuel evaporates slowly and may contaminate the contents of your pack</li> </ul>

		<ul style="list-style-type: none"> <li>• Fuel needs a special container that seals well</li> <li>• Requires priming</li> <li>• Older versions are heavy and bulky</li> </ul>
<b>Solid fuel</b> <b>e.g. Coghlan's fuel tablets</b>	<ul style="list-style-type: none"> <li>• Simple to use</li> <li>• Very safe option for beginners as the fuel can't be spilt</li> </ul>	<ul style="list-style-type: none"> <li>• Low heat output</li> <li>• Produces toxic fumes</li> <li>• Smells strongly</li> </ul>



**Figure 2:** Types of stoves

When selecting a stove type, consider its maintenance and operability. Liquid fuel stoves generally require more care and maintenance than gas canister stoves.



**Figure 3:** Safety valve lid for methylated spirits fuel bottle (essential to avoid fuel spills)

# Participants

How to ensure the activities match the participants' abilities and needs.

In addition to the generic participant considerations (see General Guidance for Organised Outdoor Activities), organisers of camp cooking and fire activities should implement strategies to:

- Consider the age and competence of participants. Be confident they will follow safety instructions and demonstrate acceptable behaviours during activities. Liquid fuel stoves are better suited to older participants. Solid fuel stoves are the safest option to avoid fuel spills or flare ups.
- Ensure participants are comfortable around fires and/or in the dark.
- Identify any dietary requirements that need to be catered for, including religious, cultural, allergy, and other health needs. Consider how these needs will be met, i.e. whether separate cooking pots and/or utensils to prevent cross-contamination, or to respect cultural or religious practices.
- Check whether participants have any specific allergies or health issues. If so, ensure they have appropriate medication with them.

# Supervision

Guidance on the level and style of supervision typically required for this activity.

Consider the following when determining the appropriate supervision structure for camp cooking and fires.

- For capable groups of adults and teenagers, one leader may be adequate to supervise cooking/fires.
- For younger groups, consider having two or more leaders – especially with open flames. Keep in mind that children will get excited at the sight of a campfire and may react differently to usual. You may need to limit the number of people around your fire at a time.
- If you have participants that require additional support, you may require extra leaders to directly help those participants during the activity.
- If participants gather firewood, they should:
  - stay within sight of others and/or carry a whistle or head torch to avoid getting lost
  - harvest only dead, dry, standing wood
  - carry branches at or below hip height and avoid throwing them.

## Activity risk management

### Pre-activity

- Ensure that there are clear boundaries in place so that everyone knows where the fire and/or cooking area is.
- If having a campfire, assess whether wind conditions are at an appropriate level to keep the fire contained.
- Have a method for extinguishing fire close by, such as water, dirt, or a fire extinguisher.
- Provide a clear briefing that includes behavioural guidelines, i.e. no loose clothing or hair when close to flame, no running close to the site.
- Ensure adult leaders are included in the briefing and don't assume they are familiar with safe fire protocols.
- If cooking on gas or liquid fuel stoves, consider having an extra leader to assist with managing the stoves.
- A small fire in some form of appropriate container helps to minimise risk, i.e. firepit or drum.
- If using liquid fuels, ensure that fuel bottles have a safety valve lid and are clearly labelled.
- Have a clear process for managing dietary requirements, food labelling, and separate utensils to eliminate cross-contamination.
- Ensure participants are aware of how to correctly cook their food and not to consume raw or undercooked food.
- Store spare fuel at least 3 metres away from the stove/fire and sheltered from any wind. If cooking inside, spare fuel containers should be kept outside and away from doorways.
- Store dry firewood at least 3 metres from the firepit so that it is not a trip hazard and is ideally upwind from the fire.

### During activity

- Monitor the weather for changes in wind direction or strength that might increase the risk of the fire getting out of control.
- Ensure that a fire or stove is never left unattended while lit.
- Light one fire, gas, or liquid fuel stove at a time, with direct supervision.
- Ensure that the stove is out and cool enough to touch before refuelling. This is particularly important with methylated spirits stoves, where the flame can burn almost invisibly.
- Ensure that stoves are refuelled away from the fire/cooking area and away from any other naked flame, i.e. candles. Allow stoves to cool down before refuelling. If cooking in a hut, refuel outside.

- If cooking on picnic tables, participants must sit with their legs on the outside of the bench seat (not under) so they avoid getting burnt from hot liquids, avoid knocking the table, and can easily stand and walk away.
- Remind participants that skewer-cooked food (i.e. marshmallows, damper) needs to cool sufficiently before they eat it.
- Ensure hand washing facilities are used before handling food or eating.
- Manage the size of the fire and stop adding wood early to allow it to burn down to embers before extinguishing.

### Post-activity

- Have one leader in charge of checking all fires and stoves are correctly put out and are cool before packing away. Fires should be extinguished using repeated dousing with water and stirring until ashes are cold to touch.
- Dispose of any waste, including cooking and washing-up water, appropriately.
- Follow [Leave No Trace principles](#).

### In the event of an emergency

Contact emergency services on 111 immediately if a fire becomes out of control.

Ensure others in the area are alerted and evacuate as required.

**In New Zealand, 98% of wildfires are caused by people.<sup>1</sup>**

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<sup>1</sup> [Civil Defence: Wildfires](#)

## Leader competence

The experience and knowledge required by those running the activity, both for normal operation and for managing emergencies. Consider what competence assistant leaders need, especially where parents or other adults are supporting the person running the activity.

## Camp cooking, fire skills and knowledge

- Evaluates the suitability of the site as a safe and effective location for cooking with fires or stoves.
- Briefs assistant leaders before the activity on correct processes, safety management, and required supervision.
- Manages participants (individuals and as a group) around fires and stoves during normal and emergency situations.
- Teaches and supports participants to build a successful fire and fire pit.
- Has in-depth knowledge of the equipment being used, including how to check if it is safe to use.
- Understands how to use a fire or stove safely to hygienically produce a nourishing meal.
- Understands hazards and associated risks involved.

## Relevant qualifications

The following qualifications are relevant for camp cooking management:

- New Zealand Certificate in Outdoor Instructor (Level 5), Bush Walking strand
- NZOIA Bush 1
- NZOIA Bush Leader with Overnight Endorsement



**“Experience is the teacher of all things.”**

**Figure 4:** An outdoor fire

## Resources and equipment

Consider what equipment and resources are required to ensure the activity can be run safely. Participants may be required to bring these, or they may be provided to them.

### Participants

What each participant needs to bring to the activity.

- Appropriate clothing:
  - clothing that is not highly flammable (cotton and wool are preferable to synthetic materials. If this is not possible, participants should be aware that polypropylene and fleece are flammable materials)
  - no loose-fitting or dangling items (use hair ties for long hair)
  - arms and legs covered to protect from embers
  - covered footwear
- Consider insect repellent
- Personal lighting (headlamps and torches)
- Personal cutlery, including plates, bowls, cups, knives, forks, and spoons
- Personal medications (and spares of critical medications)

### Group

What each group needs to bring to the activity or consider.

- Cooking equipment
- Ensure pots and pans are suitable for the size of the stove
- Provide a means of handling hot pots, e.g. oven mitt, tongs, spondonicle, large stick with notches, or pot grabber
- Ensure stoves have the correct type of fuel in sufficient quantities
- Check that fuel and gas lines do not leak when under pressure or during use
  - Consider bringing spare seals and/or stove repair equipment
  - Check the seal (O-ring) inside the gas stove before use
  - Check that the rubber seal on gas regulators is in good condition and that the expiry date for 9 kg gas bottles is current before use
- Ensure separation requirements are met for participants with religious or allergy needs. Separate cooking containers, food preparation implements, and washing facilities may be required

- Provide hand washing facilities. If using hand sanitiser, be aware that it is flammable, so keep it away from stoves and flames
- Ensure you have enough food for participants. Bring spare food in case of spillage
- Store food hygienically at the correct temperature to prevent illness or ensure that chosen food does not require refrigeration
- Provide equipment to wash up thoroughly (scrape, rinse, wash) and dispose of or recycle all waste and wastewater appropriately (scrapers, basins, buckets, dish soap, scrubbers, bins, etc.)
- Group lighting (lanterns, candles)
- Ensure all leaders and participants have access to effective night lighting (torches, headlamps, etc., with spare batteries) to move around safely after dark
- First aid kit and other emergency gear (e.g. fire extinguisher, fire blanket, emergency shelter, sufficient water to cool burns, i.e. a bucket of water at each cooking point). Ensure leaders know how to use the equipment

## Leader

What each leader needs to bring to the activity or consider.

- List of participants, including emergency contacts, health, dietary, and other needs
- Safety plan, including emergency contact numbers and two methods of communication with emergency services (see Camp Cooking & Fires Planning Template)



**Figure 5:** Cooking on an outdoor fire

# Leave No Trace (LNT) / Environmental protection

Consider how you can plan your activity to minimise long-term damage to the environment. Camp cooking and fires can have a high environmental impact, so dispose of food waste appropriately and ensure fires are fully extinguished.

There are seven key LNT principles:

1. Plan ahead and prepare
2. Travel and camp on durable ground
3. Dispose of waste properly
4. Leave what you find
5. Minimise the effects of fire
6. Respect wildlife and farm animals
7. Be considerate of others

For more information, see: [Leave No Trace New Zealand](#)

## Exemplars

Examples of good practice.

Mountain Safety Council Get Outdoors Series:

- [Camp Craft Episode 24: How to manage a campsite](#)
- [Camp Craft Episode 25: How to light a fire](#)
- [Camp Craft Episode 26: Cooking on a stove in the outdoors](#)

## Further support

Places to gain more information from, e.g. specialist websites, industry bodies, or clubs.

Mountain Safety Council

<https://www.mountainsafety.org.nz/>

Outdoor Training NZ

<https://www.outdoortraining.nz/>