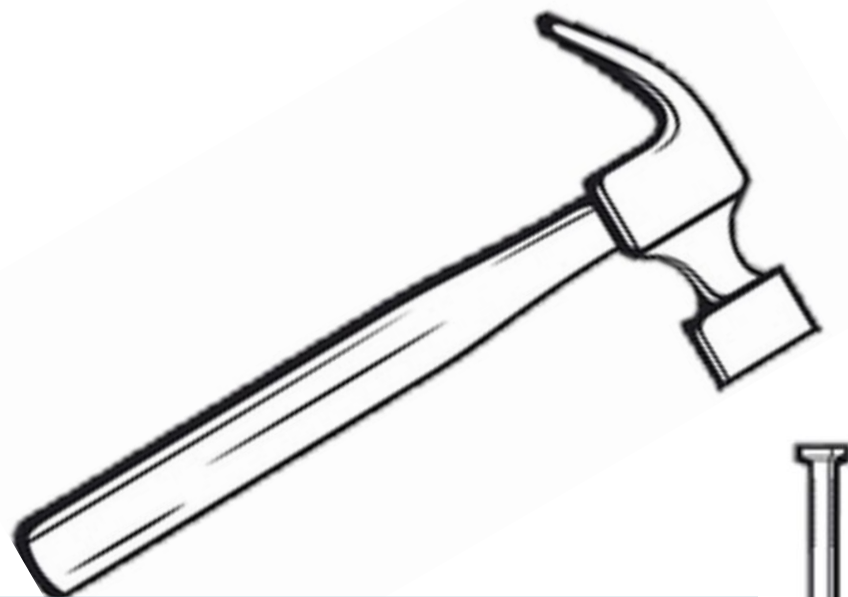


PREDATOR FREE  
WELLINGTON



# HOW TO RUN A TUNNEL BUILDING WORKSHOP

Predator Free Wellington

# Introduction

Tunnel building workshops serve three primary functions; building tunnels, building community and building network resilience. They're a great way to bring everyone together over a shared activity, fostering connections amongst trappers and topping up tunnel supplies to ensure you can harness enthusiasm and facilitate an expanding tāwhiti (trap) network.

We held the first of these workshops in 2021 after finding that we had more people wanting traps than we could keep up with. We'd also been hosting regular catch ups for trappers but it wasn't the best use of time for volunteers already giving so much, and attendance reflected this. So, when we asked trappers how we could best support their mahi, the answer was unanimous — we need more traps and we can help you make them — so tunnel building workshops began.

I hope this resource provides a useful starting point and you can fine tune your process over time, creating a workshop that best suits your community.

Happy tunnel building!



Our first workshop saw 40 volunteers make over 200 tunnels, despite the wintery conditions (Credit: Hannah Waring)

# Timber

## Source

Timber is the biggest expense involved with the workshops so there's two recommendations for sourcing it more cheaply:

Sponsorship: contact your local Placemakers, Mitre10, Bunnings Warehouse, ITM about the potential for a sponsorship arrangement. This could be in exchange for:

- Their logo being spray painted onto every tunnel made at the workshop
- A shout out included in any social media related to the workshop
- Other materials required for the workshop being purchased at their store.



A stainless steel stencil we had made by a local water cutting company, to spray paint our traps with 'Mitre 10 Crofton Downs', our generous sponsor. You could also spray paint on your trapping group logo. Stencil dimensions: 400mm x 130mm

Retired fence palings: put the word out community contacts, such as your local council and schools, to be the first port of call when fences are being dismantled. If it's the right dimensions (see below) and in good enough condition (i.e. not rotting) by giving palings a second life as tunnels you're saving them from landfill. The second hand wood supply can be sporadic, so it's a good top up for any wood acquired through sponsorship.

**Top tip #1:** If possible order wood to a 0.5m length (i.e. 2m, 2.5m, 3m... etc). That way, when you cut the timber into 500mm lengths during the workshop, there's no cut offs which often go to waste. Although note that for each paling, there will always be a short piece because of the millimeters taken up by the blade, so make sure you group these shorter pieces together.

## Type

Dimensions: 150mm wide x 25mm deep (to then be cut to 500mm lengths)

State: Rough cut, treated (treated gives the tunnels more durability over time)

# Materials

To make tunnel you will need:

- Fence palings (150mm x 25mm x 500mm)
- Galvanised jolt head nails (size: 60mm x 2.8mm)
- Galvanised flat head nails (size: 75mm x 3.15mm)
- Galvanised staples (size: 19 x 2.0mm)
- Mesh (size: 19mm<sup>2</sup>)
  - Front: 7 squares x 10 squares\* with opening (x9 squares)
  - Back: 7 squares x 9 squares\*

\*NB. These measurements are a guide - the number of squares listed (width and length) and size of the opening is based on a mesh hole size of 19mm<sup>2</sup>, but this will vary if your mesh is a different size.

The following quantities are what would be required to make 150 or 200 traps, this calculation can be adjusted by replacing 'n' as required:

Materials	Amount per unit	Calculation	n = 200 units	n = 150 units
Timber	4x (150m x 25mm x 500mm)	2m (500m * 4) x n	400m*	300m*
Jolt head nails	10	10 x n	2000	1500
Flat head nails	1	1 x n	200	150
Staples curved**	9	9 x n	1,800	1,350
Mesh screen	1x front w/ opening 1x back	Estimation: 5m for 150 traps	14m	10m

\*This will differ depending on whether your timber is supplied to a .5m length (see top tip #1)

\*\* If you've got a staple gun handy, rather than using 9 galvanised staples, you can use three to affix the mesh flap, and use the staple gun to secure the other side (the mesh piece with the entrance hole that doesn't move).

There are several different tunnel designs out there, however these quantities are based on the following design which is simple but effective. You can read the guide on our website here:

[www.pfw.org.nz/get-involved/resources/how-to-build-a-trapping-tunnel/](http://www.pfw.org.nz/get-involved/resources/how-to-build-a-trapping-tunnel/)

**Top tip #2:** Print out a few copies of the tunnel building guide to have on hand at your workshop for people to refer to

# Equipment

Below is a list of the equipment you will need for 20-30 attendees. Note that the quantities suggested will need to be scaled to the number of people attending:

Category	Equipment	Quantity	Notes
Hand tools	Hammers	10+	The more the better
	Metal snips	10+	The more the better
Power tools (& extras)	Drop saw (and saw stand)	3-4	For cutting timber to size
	Angle grinder	1-2	For cutting strips of mesh which can then be trimmed to size
	Extension lead	2	To plug in power tools set up outside
	Multi board	2	To plug in power tools set up outside
	Drills	6+	This is optional, but it is much easier to pre-drill a hole, prior to hammering in the jolt head nails and prevents the wood from splitting too.
Safety	Ear/eye protection	3-4	For those operating power tools
	Masks & disposable gloves	3-4	For spray painting the stencil
	First aid kit	1	Health and safety
Other (optional)	Guillotine	1	If you can source an industrial mesh-cut guillotine it is a very effective and fast way to trim mesh to size.
	Tables	4	Depending on what furniture you already have on hand, it's great a idea to have a few fold out tables for people to work on.
	Chairs	14	Depending on what furniture you already have on hand, it's a great idea to have some chairs to sit on
	Corflute or cardboard mats		Highly recommend sourcing for people to kneel on when assembling tunnels
	Instructions	5	'How to build a trapping tunnel' instructions. See tip #2
	Stencil	1	For spray painting the stencil
	Black spray paint	2	For spray painting the stencil
	Tarpaulin or sheet	1	For spray painting the stencil

**Top tip #3:** Instead of purchasing equipment, ask attendees to state what they can bring when they RSVP, and keep track of what's left to source (see page 8)

# Workstations (1 of 2)

The following workstations are the recommended way to facilitate the tunnel building processes. It works well to have a quick kōrero at the beginning of the workshop and as part of this, explain each of the 6 stations and give a demonstration of how the tunnels are made

Rather than seeing one tunnel through from start to finish, encourage people to set up at a workstation and move to another when they're ready to try something new.

This workshop (especially workstations 1, 2 and 5) is best suited to an outside set up with a power outlet and wharepaku (toilet) in close proximity.

Optional: Use one of the trestle tables to set up some refreshments.

## 1

### TIMBER CUTTING

- **Purpose:** Cutting timber into 50cm lengths
- **Materials:** Timber
- **Equipment:** drop saws, saw stands, extension lead, multiboard, ear/eye protection
- **Workforce:** 10% (2 per drop saw)

**Top tip #4:** For safety reasons it's best that those who bring the drop saws are responsible for using them during the workshop

**Top tip #5:** have a jig set to 500mm on the drop saws to speed up process and ensure all lengths are uniform



## 2

### TUNNEL ASSEMBLY

- **Purpose:** Nailing together 4x50cm lengths to create the tunnel
- **Materials:** timber, jolt head nails
- **Equipment:** Hammers, drills, corflute/cardboard mats
- **Workforce:** 25%

**Top tip #6:** Ask people to label their equipment (hammers or pliers) so it can be used by anyone during the workshop



# Workstations (2 of 2)

## 3 MESH CUTTING

- a) Cutting the role of mesh into manageable strips
  - **Equipment:** angle grinder, eye/ear protection, multiboard, extension lead
- b) Cutting the mesh strips to size (front/back)
  - **Equipment:** guillotine, metal snips
- c) Cutting in the opening (for the front)
  - **Equipment:** metal snips

**Materials:** Mesh  
**Workforce:** 40%

**Top tip #7:** Make sure to have the majority of people at station 3 to prevent a bottleneck

**Top tip #8:** Instead of cutting out the entrance way until it's flush, you can also fold back the mesh. This prevents predators getting scratched and becoming trap shy.



## 4 MESH ATTACHING

- **Purpose:** Attaching the two mesh pieces to the front and back of the tunnel
- **Materials:** Mesh, staples, flat head nail
- **Equipment:** Hammer, metal snips, staple gun (optional)
- **Workforce:** 20%

**Top tip #9:** Make sure people know that the flat head nail and back mesh flap need to move easily - this station requires precision



## 5 SPRAY PAINTING

- **Purpose:** Spray painting trapping group logo and/or sponsor's logo on to finished tunnels
- **Equipment:** Stencil, tarpaulin, masks and disposable gloves, black spray paint
- **Workforce:** 2%



## 6 QUALITY CHECK

- **Purpose:** Check that..
  - Entrance mesh is trimmed flush and smooth, or bent backwards
  - Entrance hole is level with the base piece
  - Flat head nail can be easily removed and back mesh can open easily
  - Wooden sides are attached securely
- **Workforce:** 3%



# Organiser's timeline

## Pre-workshop timeline

The timeline of events leading up to the workshop could be as follows:

3 months prior	<ul style="list-style-type: none"><li>• Order wood and/or put a call out for retired fence palings</li><li>• Confirm venue (e.g. community hall with outside area)</li><li>• Send out sign up form (see below)</li></ul>
1 month prior	<ul style="list-style-type: none"><li>• Hire (or buy) the remaining equipment that can't be borrowed</li></ul>
1 week prior	<ul style="list-style-type: none"><li>• Send out an event reminder to attendees</li><li>• Print off instructions</li><li>• Arrange for to be timber delivered</li></ul>
Event day	<ul style="list-style-type: none"><li>• Set up workstations with appropriate equipment and materials</li><li>• Purchase refreshments (optional)</li></ul>

## Sign up form

As mentioned, it's a great idea to send out an online sign up form to ascertain:

- Who is coming to your event (this gives you the ability to cap numbers)
- Ask attendees for their contact details for sending reminders and updates
- Understand who can bring what equipment (see top tip #3)

You could create this form using Google forms ([www.google/forms/about/](http://www.google/forms/about/)) or Jotforms ([www.jotform.com](http://www.jotform.com))

Questions to include on your form:

- Name
- Phone number
- Email address
- How many other people are you responding for?
- What can you bring along?

**Top tip #10:** Include a list of the items you need people to bring as a prompt e.g. "It would be great if you could bring along: hammer, mesh cut pliers, drop saw... etc"

# Workshop day!

A run sheet can help the workshop to flow smoothly, and help to create an enjoyable and productive session.

## RUNSHEET

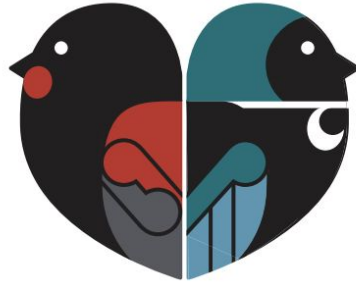
Name of event:  
Date of event  
Address of event:

**Top tip #11:** We've found it's best to host these events on a Saturday afternoon with a save-day for the same time the next day (Sunday), in case of wet weather.

Time	Action	Responsible	Notes
1pm	Set up venue <ul style="list-style-type: none"><li>• Workstations</li><li>• Tables and chairs</li><li>• Materials/equipment</li><li>• Refreshments</li></ul>	Organiser	
2pm	Attendees arrive	N/A	
2:10pm	Kōrero <ul style="list-style-type: none"><li>• Thanks for coming</li><li>• Health &amp; safety notes</li><li>• Workstation process</li><li>• Trap building demonstration</li></ul>	Organiser	H&S notes may include identifying a first aid person, the location of the first aid kit, any site hazards and PPE use for power tools (Tip #4)
2:30 - 5pm	Building	All	Encourage attendees to switch up the workstation they're at and take refreshment breaks
5 - 5:20pm	Wrap up and clean up	Organiser	Create a stack of the completed tunnels so you can easily count and then hand them out at the end

**Top tip #12:** Make a note of what worked well and what didn't at the end of the workshop so you can remember for your next event!

**Did you host a workshop?**  
Let us know how it went by emailing [hello@pfw.org.nz](mailto:hello@pfw.org.nz)



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**'He rau ringa e oti ai'**  
'Many hands make light work'

- *Māori proverb*

Credit for the photos included in this guide:

1, 5 & 6 - Hannah Waring

3 & 4 - Owen Calder

2 & 7 - PFW



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Me Heke Ki Pōneke