



"We'll see you right"

# THE RIGHT WAY TO BUILD A TIMBER FENCE



## TOOLS

- BUILDER'S SQUARE
- DRILL
- HAMMER
- HANDSAW OR ELECTRIC SAW
- RETRACTABLE TAPE MEASURE
- SPADES AND SHOVELS
- SPIRIT LEVEL
- STRING LINE
- TWO SAWHORSES

## MATERIALS NEEDED

- 60 MM HOT-DIP GALVANISED FLAT HEAD NAILS
- 100 MM HOT-DIP GALVANISED FLAT HEAD NAILS
- 100 X 75 MM TIMBER POSTS H4 TREATED SAWN [OR 100 X 100 MM TIMBER POSTS H4 TREATED SAWN]
- 100 X 50 MM OR 75 X 50 MM TIMBER RAILS H3.2 TREATED SAWN
- CONCRETE READY MIXED 40 KG OR BUILDERS MIX CEMENT 40 KG
- SCRAP TIMBER FOR BRACES AND SUPPORTS
- STAIN OR PAINT
- SUITABLE LENGTH PALINGS H3.2 TREATED SAWN [OR PICKETS H3.2 TREATED]

NOTE: IF TIMBER TREATMENT IS COPPER AZOLE OR COPPER QUARTERNARY THEN NAILS SHOULD BE STAINLESS STEEL.

## DISCLAIMER

Please Note: Whilst the advice and recommendations contained in this brochure have been produced with proper care, they are offered only with the object of assisting those interested in home improvement projects and ITM does not accept responsibility for the advice, recommendations, etc, contained herein.

If you have any queries please contact your local ITM store for further advice.

Note: A Building Consent may be required.



Produced in association with BRANZ.

CHECK OUT OUR OTHER GUIDES IN STORE OR ON THE WEBSITE WWW.ITM.CO.NZ



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## INTRODUCTION

Timber fences are both decorative and functional and can enhance your home. It's important then, that your fence complements the style of your house.

With any fencing, the wood you choose, as well as the method used to build it, determines its character. Good quality timber is crucial. Inferior materials deteriorate and at worst collapse. Use timber that has been treated to at least H3.2 standard for elements of the fence that are above the ground e.g. palings, railings etc. Use H4 treated timber for the elements of the fence that are to be placed in the ground e.g. posts. Protecting your fence with paint or stain is also advisable.

The right tools make the job easier and help to ensure your structure turns out square, level and plumb.

Timber posts set in concrete, with rails and vertical palings, is the typical New Zealand suburban fence. The basic post and rail fence is a starting point for most fences, including picket and paling fences. Follow the directions below, adapting the final stages for your desired look.

## PLANNING & CONSENT

Building a fence within your property generally doesn't need building consent, however if it is a boundary fence, discuss plans with your neighbours, obtain their agreement and make sure you know where the boundary is.

If a dispute arises, get advice from your local council.

Before starting on your fence, check the type of soil in the area, check for any obstructions and also check how even the ground is. The type of soil will affect the depth of the posts, which will need to be considered to ensure the fence is stable. Preferably keep surfaces as level as possible.

Before going to your local ITM store for supplies, measure the length of the fence, then calculate how many posts, palings (or pickets) and rails you need. If unsure your local ITM store can advise you on the quantities of product required.

## POST AND RAIL FENCES

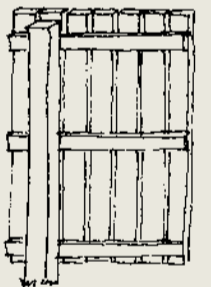
Post and rail fences are the most common and easy to construct. Essentially, two or three rows of horizontal rails are connected to upright posts, set in the ground at equal intervals.

This type of fence can be made with sawn posts and matching rails. Alternatively, machined posts, rails or palings can give your fence a different look.

Once you have concreted into place your end and intermediate posts as outlined (Steps 1-5), your rails can be attached in two ways: fixed to the outside of or between the posts. If using the first option the rails should be joined at the centre line of the posts. Fix a block, at the correct height, to support your rail as you nail it into position.

If you are fixing the rails between the posts, once again use a support block and skew nail your rails to the post with at least four 100mm galvanised nails. This is more difficult, and requires accurate measuring and cutting of the rails.

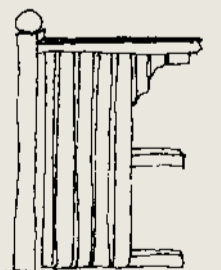
Of course, trimming your pieces of rail for a sloping site demands the cutting angle be marked beforehand.



## PALING FENCES

Paling fences are versatile and simple to erect and many styles are available.

Follow the steps outlined (Steps 1-6), fixing the railings to the posts, then attaching the palings to the rails. Detailing can then be added. Fixing a capping rail over the top or between your posts can be an attractive finish. You can add a trellis top or alternatively, create a 'good neighbour' paling fence by attaching palings on both sides, overlapping slightly so the same effect is achieved on both sides.

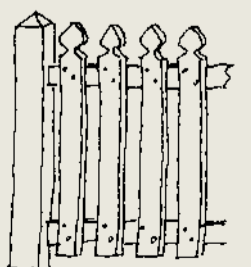


## PICKET FENCES

For a picket fence, it is suggested that your posts need to be 2.1m apart measured from the centre of each post. The rails are then fixed either to the face of the posts or between the posts (Step 6). Paint the posts, rails and at this stage the pickets, before attaching them to the fence.

You can now nail the pickets to the fence. Once again, use a string line to place the pickets in a straight line. Use a spirit level to ensure each picket is vertical, and then fix with 40mm galvanised jolt head nails, two in each rail for every picket. Use a suitable spacer between pickets to give a gap.

Although the majority of picket fences have straight or angled tops, there are many other possibilities, including cutout designs.



STEP 1

## MEASURING

Measure the total length of your fence and lay out the line of the fence with a string attached to two pegs. The string should indicate where the front of the posts will sit. Hammer in pegs where the main supporting posts go, calculating the distance between with a retractable measuring tape. The distance depends on the type of fence you are building. As a guide, standard post spacing should be 2400mm from centre of post to centre of next post.

Chalk or spray paint around the pegs, as they are removed to mark where the holes should be dug to complete the positioning of the post holes.

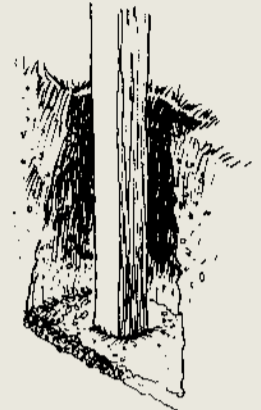


STEP 2

## DIGGING

Excavate post holes to a depth of a third the length of the posts. Holes should be wider at the bottom than at the top with a diameter approximately three times the size of your posts. Use a retractable tape to make certain each hole is the same depth.

Pour a small amount of concrete into each hole before positioning the posts in the footings (this will ensure the posts aren't directly in contact with the ground). For most types of fences, 100 x 75mm posts are adequate, but end and corner posts and gate posts should be 100 x 100mm.



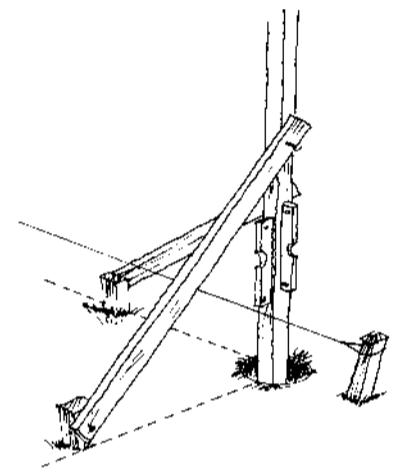
STEP 3

## THE END POSTS

The end posts are an essential start for your fence. Brace the end posts in place with battens or timber off-cuts. Tack the nails in for easy removal later on.

Check that each post is vertical (both sides) with a spirit level. Check that the top of the posts are the correct height above ground level. Posts which are too high may be trimmed later.

Before concreting in, do a final check that the post is vertical and square in the hole.

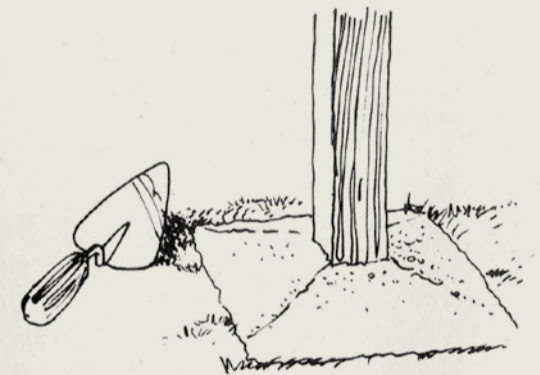


STEP 4

## CONCRETING

Now you can concrete posts in place, using pre-mixed concrete or a mix of 1 part concrete and 6 parts building mix. Keep the mix stiff and rod it into the hole tightly, removing any air pockets. Slope the top of the concrete away from the posts for drainage.

Leave the posts for anything from two days to a week to set. Finally, make sure the two posts are the same height and vertically aligned.



STEP 5

## INTERMEDIATE POSTS

Run a string line about 700mm above the ground. Place the other posts evenly between the end posts, no more than 2400mm apart. Check for alignment by making sure the posts are close to, but not quite touching the string line. Check that the posts are vertical, square-on, in line and there is a brace in place on the corner posts.

Re-check before concreting in and leave until concrete is set.

NOTE: IF TIMBER TREATMENT IS COPPER AZOLE OR COPPER QUARTERNARY THEN NAILS SHOULD BE STAINLESS STEEL.



STEP 6

## RAILINGS

The fence height dictates how many rails you need. Rails are usually 100 x 50mm for 2400mm post spacings. As a rule, fences up to 1200mm in height require two rails, while fences over this height require at least three.

Your rails can be attached in two ways, face-fixed to posts (nailed to the front of the posts) or cut to fit between posts and attached with 100mm hot-dip galvanised nails. It is usual to fix the bottom rail a maximum of 150mm above the ground. Use a string line and builder's square to ensure rail alignment.

STEP 7

## PALINGS

Now is the time to stain or paint the inside edges of the palings. Next, set a string line between the two end posts to line up the top of your palings. If the fence runs downhill, line up the string line with the upper point of each paling. If you are using basic timber palings you can install them and trim to the correct height later.

Fix your CCA-treated palings to the rails with 60 x 2.5mm hot-dip galvanised flat head nails. Use two nails to attach the palings onto each rail, driving the nails in at different angles to prevent lifting.

Space the palings evenly along the fence line. Do this with a suitable spacer block, made to suit the gap required. Use a spirit level to check that palings are kept vertically correct.

