



HOW-TO-BUILD GUIDE

FENCES AND SCREENS

WHAT YOU CAN BUILD USING THIS GUIDE

This guide shows you how to build a timber fence on level ground using 1.5 m long palings or a pre-made trellis insert.

BEFORE YOU BEGIN

Fences less than 1.8 m high generally do not require a building or resource consent but the type and height of fence you are permitted to build may be limited by building covenants. For fences on the boundary check that your neighbour is happy with the fence that is proposed.

PLANNING YOUR FENCE

These instructions are for a fence with posts at a maximum spacing of 2.4 m, and with either trellis panels or 1.5 m vertical palings fixed to horizontal rails running between posts. You will need to measure the total length of the fence to work out the amount of materials required. Read this entire guide before starting work.

MATERIALS

Paling fence

Posts	100 x 75 mm H4 radiata pine treated timber posts 2.1 m long
Rails	100 x 50 mm H3.2 radiata pine treated timber rails (three rails in multiples of 2.4 m lengths to run between posts)
Palings	150 x 25 mm H3.2 radiata pine treated timber palings 1.5 m long
Braces/pegs	scrap timber for temporary braces and pegs
Nails	100 mm hot-dip galvanised jolt-head nails 60 mm hot-dip galvanised flat-head nails
Concrete	pre-mixed cement and aggregate in bags
Spray paint	for marking post positions on the ground

Trellis fence

Posts	100 x 75 mm H4 treated radiata pine timber posts 2.1 m long
Rails	100 x 50 mm H3.2 treated radiata pine timber rails (two rails in multiples of 2.4 m lengths to run between posts)
Trellis	you will need to order trellis screens to your preferred style and sized to suit the distance between posts and the fence height. Ensure that the screen is made with H3.2 treated timber fixed with stainless steel staples and that it incorporates a rebated edge frame into which the trellis screen is fitted. Site measure for each panel after the posts are installed to give a neat fit
Braces/pegs	scrap timber for temporary braces and pegs
Nails	100 mm hot-dip galvanised jolt-head nails 60 mm hot-dip galvanised flat-head nails
Concrete	pre-mixed cement and aggregate in bags
Spray paint	for marking post positions on the ground

CONSTRUCTION

End posts

1. At each end of the fence line dig a square or round hole 600 mm deep by 200 mm wide or 250 mm diameter for the end posts. Ensure that the holes are positioned so that the posts sit inside the boundary of your property.
2. At each post drive two pegs into the ground to allow temporary braces to be connected at right angles to hold the post in position while it is concreted in (see Figure 1).
3. Place 100 mm of the dry concrete mix in the bottom of the hole and insert the 100 x 75 mm timber post. The narrow side of the post should be parallel to the fence line. Check that the top of the post is at least 20 mm more than the required finished height of the fence, and that the post is vertical in both directions (using a spirit level). Nail diagonal temporary timber braces from the post to the pegs in the ground to hold the post vertical (see Figure 1).
4. Place the rest of the dry mix concrete in the hole around the post and tamp the concrete as it is placed in the hole down with a length of timber to a compacted finished level 50 mm below ground. Apply water to the dry mix then allow one day for the concrete to cure before installing the intermediate posts.

Intermediate posts

5. Fix a horizontal string line across the face of one end post just below the top of the post and pull it tight across the length of the fence. Fix it to the other end post (see Figure 2). Use a packer to set the string line 20 mm off each post.
6. Measure and mark out on the ground locations for all of the intermediate posts. They should be no more than 2.4 m apart. If the length of the fence line does not suit multiples of 2.4 m, work out a distance where the posts are the same distance (but less than 2.4 m) apart. Dig 600 mm deep x 200 mm square or 250 mm diameter round holes at each intermediate post location (see Figure 2).
7. Install each intermediate post as you did the end posts (Steps 3 and 4 above). Set out the face of each post at the top using a 20 mm packer to the string line. (This avoids having the string line pushed out of line by an inaccurately placed post.) Ensure each post is vertical in both directions, set to the required height and braced. Allow at least two days for the concrete to cure before installing the rails.

Horizontal rails (for palings)

8. After the concrete has cured check that all posts are firm. Leave the temporary braces in place as they will help hold the post while the rails are installed.
9. Mark each post to ensure the tops of the posts are level along the fence. If necessary, cut each to the required height (see Figure 3).
10. Position the bottom 100 x 50 mm horizontal timber rail on edge 150 mm above the finished ground, across the face of the posts, and fix to the post with 100 mm hot-dip galvanised jolt-head nails. Check that the rail is horizontal. Where rails need to be joined, ensure joins occur on the face of posts.
11. Position the top rail 50 mm down from the top of the posts and fix as in Step 10 (see Figure 3). Check that the rail is parallel to the bottom rail.
12. Mark each post mid-way between the top and bottom rails and fix the middle rail on edge in this position as in Step 10 (see Figure 3). Check that the rail is parallel to the bottom rail.
13. Remove the temporary braces from each post.

Palings

14. Fix a horizontal string line across the face of the posts at 50 mm above the ground. Position the first timber paling flush with the end of and on the outer face of the timber rails at one end of the fence. The bottom of the paling should sit on the string line. You may want to pack out the string line from the face of the posts to the line of the back of the palings to aid alignment. Ensure that the paling is vertical and fix it with two 60 mm galvanised flat-head nails to each rail (see Figure 4). Don't drive nails home until all palings are installed and any adjustment to the gaps made.
15. Use a timber packer of the required thickness to form the gap between each paling and continue to fix the remainder of the palings as in Step 14. The gap between palings should be between 10 and 25 mm, depending on the look you want, and should be constant for each paling (see Figure 4). Check after every fifth paling is installed that the palings remain vertical.

Trellis

16. Top and bottom rails on edge aligning with the back face of the post are recommended for trellis fences even though the trellis will sit in self-supporting framed screens which you install between the posts. Fix rails with 100 mm hot-dip galvanised nails.
17. Have each screen made up in the style and size you require.
18. After the concrete around each post has cured check that all posts are firm. Site measure for trellis panels. Remove the temporary braces.
19. Mark each post at the required finished height above ground level – this should be 100 mm above the finished height of the top of the trellis screen when installed. Cut off each post at the required height and measure between posts for the height of each screen (see Figure 5).
20. Fix a horizontal string line across the face of the posts at 50 mm above the ground. Position the first trellis screen between the first two posts, with the bottom of the screen aligned to the string line. Ensure that the centre of the trellis edge frame is centered on the 100 mm dimension of the post. Fix the screen through the rebated edge frame to the posts at the top, centre and bottom of each side of the screen with 100 mm galvanised jolt-head nails. Fix the remainder of the panels in the same way (see Figure 5).

Figure 1

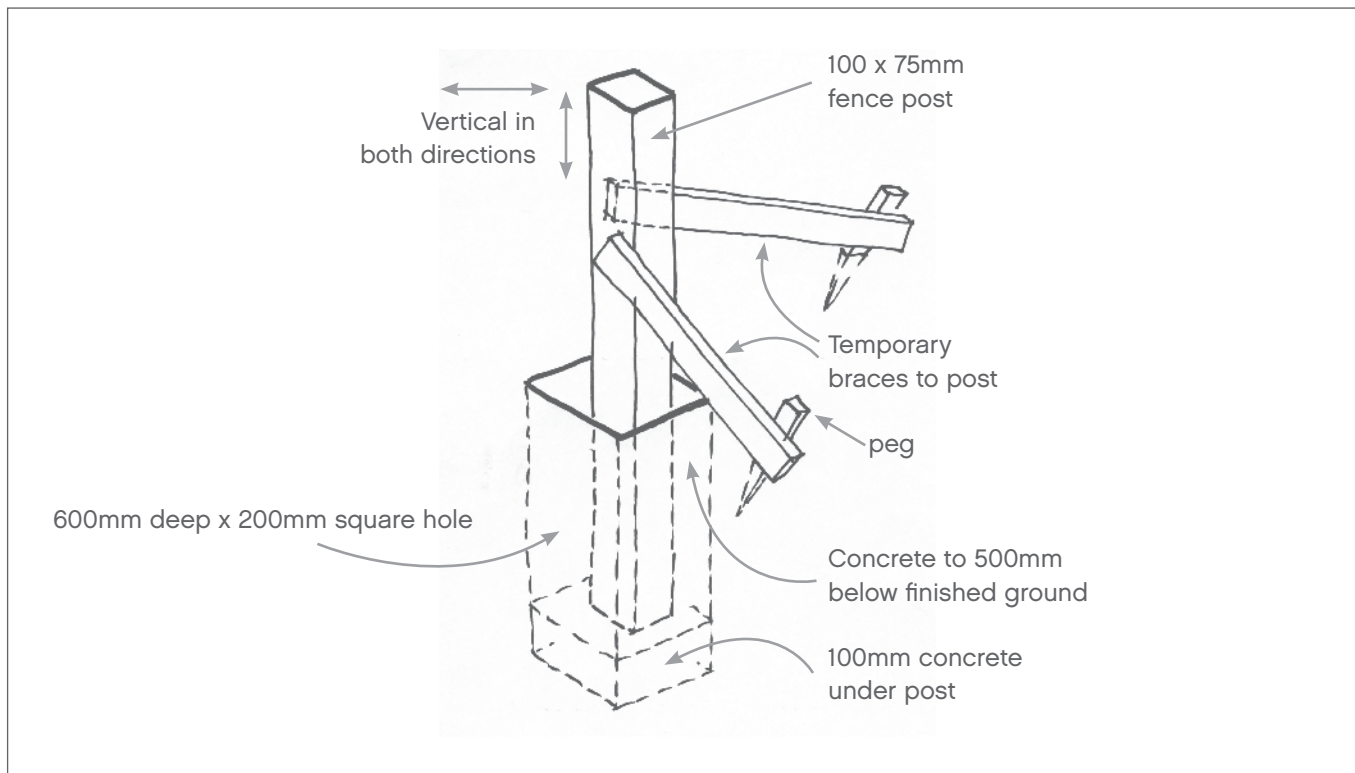


Figure 2

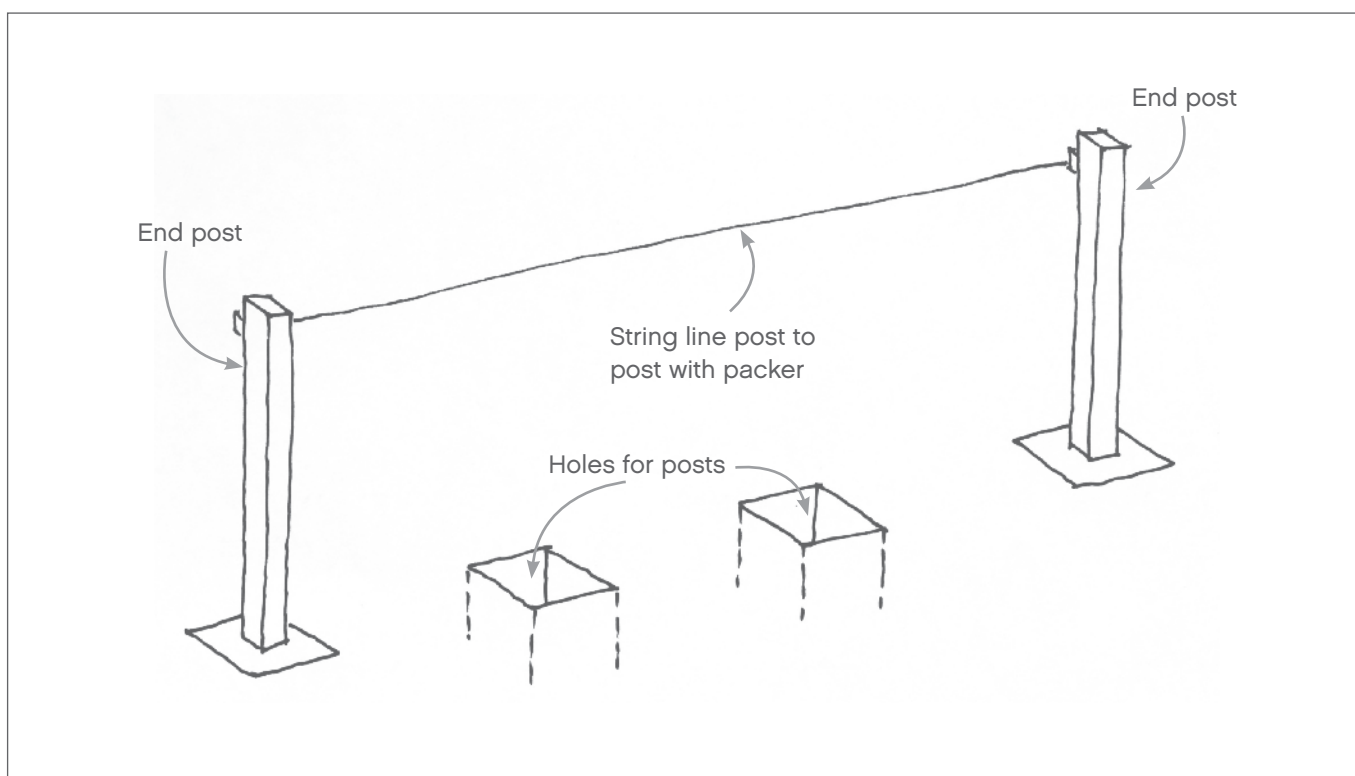


Figure 3

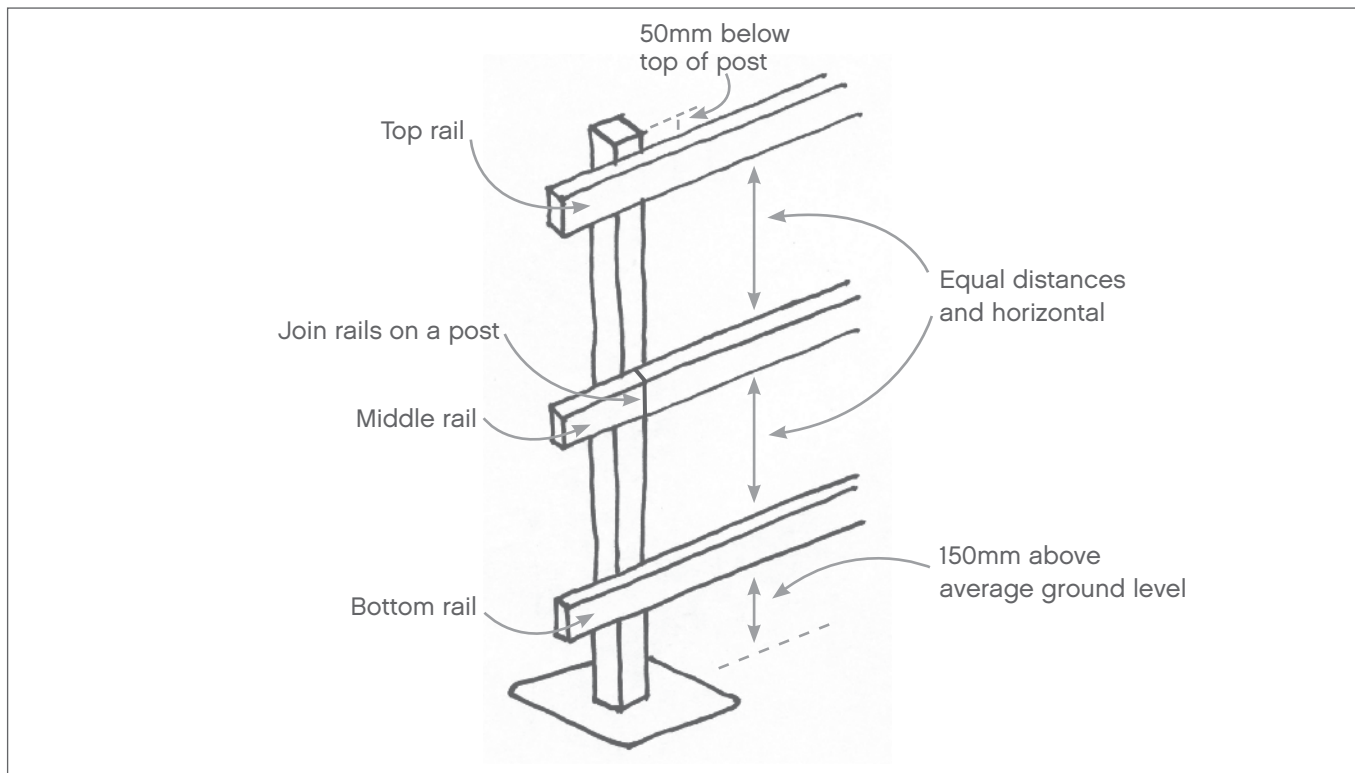


Figure 4

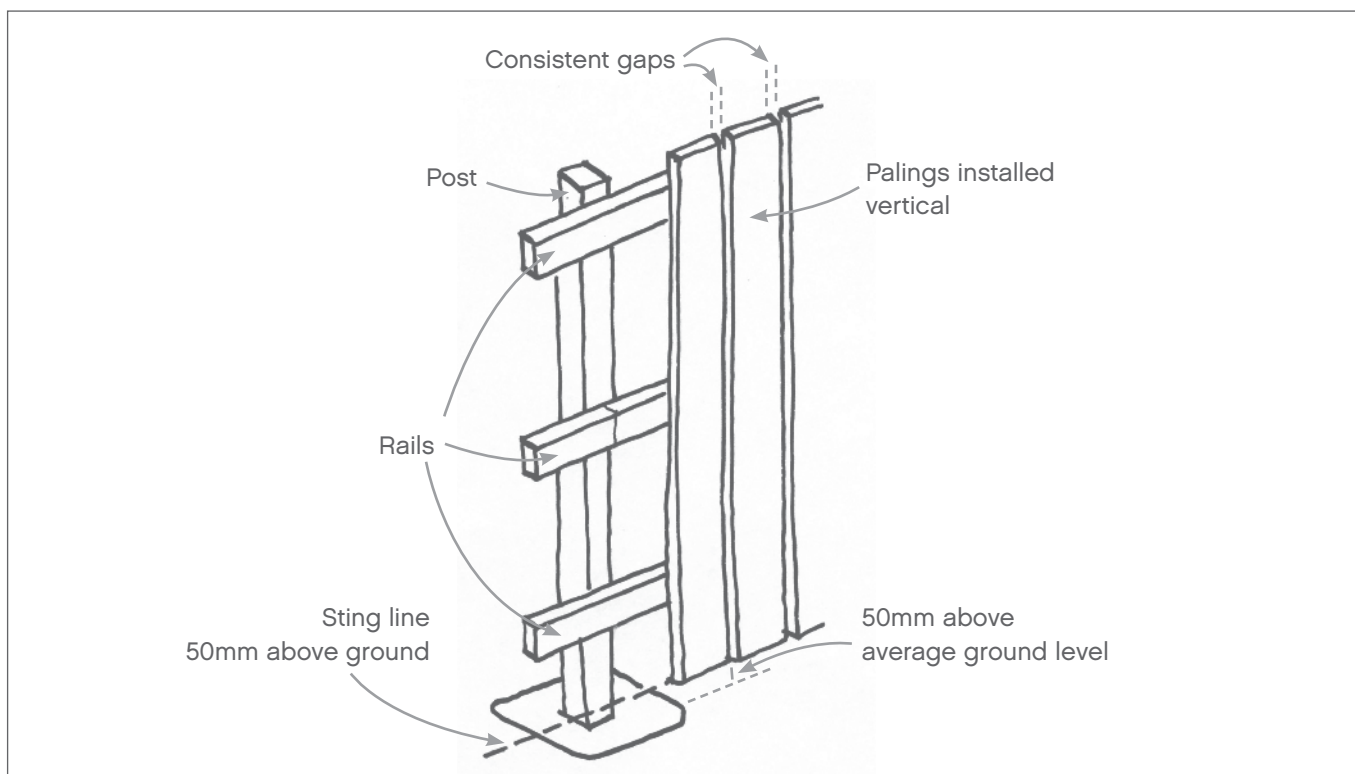
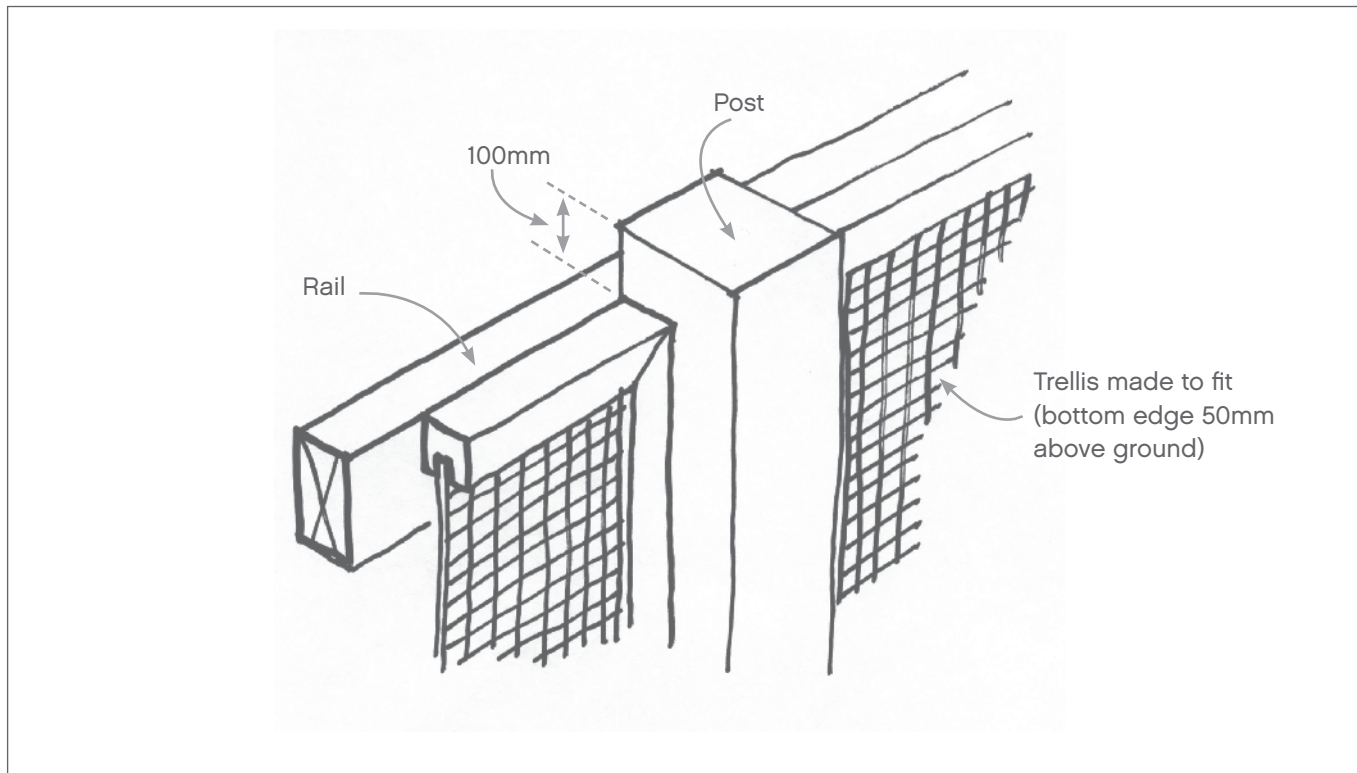


Figure 5



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