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# Other Ideas from Pergolaplans4free.co.uk

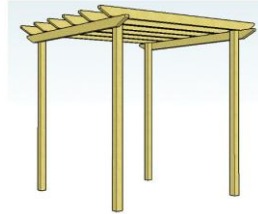
## Free Plans



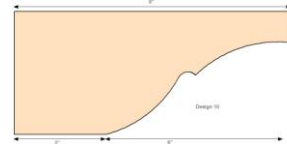
[Pergola Plans](#)



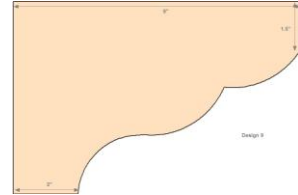
[Simple Pergola Plans Design 1](#)



[Simple Pergola Plans Design 2](#)



[4" Pergola Rafter Template](#)



[6" Pergola Rafter Template](#)

## Other Plans



[Corner Pergola](#)



[Attached Lean-to Pergola Plans](#)



[Pergola Arch and Arbour Plans](#)



[Asian Pergola Plans](#)



[Hexagonal Pergola Plans \(coming](#)

All the pergola plans come with 18 free rafter tail templates, and are fully adaptable to suit your size requirements and style preferences.

## Additional Resources

[Pergola Ideas](#)

[Pergola Climbing Plants](#)

[Pergola Kits](#)

[Pergola Pictures](#)

[Garden Makeover Ideas](#)

[Garden Furniture Ideas](#)

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## Glossary of Terms

<b>Tools</b>	
<i>Builder's square</i>	<i>Gives an exact right angle, and can be wedged up against wood to mark lines at right angles</i>
<i>Combi-drill</i>	<i>A power tool that drills and screws</i>
<i>Chuck</i>	<i>The end of the combi-drill that is rotated to house the drill and screw bits</i>
<i>Bit</i>	<i>The screw or drill that is attached to the chuck of the combi-drill</i>
<i>Reciprocating saw</i>	<i>A powered saw</i>
<i>Pilot drill</i>	<i>A small drill bit of approx. 2mm that helps prevent the wood from splitting.</i>
<i>Post level</i>	<i>A spirit level that fits around the corner of a post enabling you to level the post in both directions.</i>
<i>RCD</i>	<i>A circuit breaker that cuts the power if something goes wrong with a power supply to a power tool</i>
<b>Materials</b>	
<i>Rafters</i>	<i>Planks of wood that form the pergola roof</i>
<i>Ballast</i>	<i>A pre-mixed sand and gravel that is used for the basis of concrete</i>
<i>Concrete</i>	<i>A mix of ballast and cement</i>
<i>Post anchor/Metpost</i>	<i>A metal square-section support for holding posts upright. They can either have a spike for hitting into the ground (used without concrete), or with a metal foot that beds into the concrete</i>
<i>Coach bolt</i>	<i>Strong bolt used to secure the rafters on to the posts</i>
<b>Plans</b>	
<i>Footprint</i>	<i>The measurements as a whole, in 2 dimensions</i>
<i>Main rafter</i>	<i>These run from the entrance to exit</i>
<i>Side rafter</i>	<i>Running on the sides</i>
<i>Rafter tail</i>	<i>The shaped ends of the rafter that stick out past the end of the posts</i>
<i>Notch</i>	<i>A piece that is cut out of a rafter so that another rafter can slot into it</i>

## ***Tools and Materials***

### Tools:

*Tape Measure*  
*Step Ladder*  
*Workbench*  
*Post Level*  
*Spirit Level*  
*Mallet*  
*Hand Saw*  
*Builders Square*  
*Sledgehammer*  
*Chisel*  
*Drill (Corded/Cordless)*  
*Drill Bit Set – 2mm and 8mm wood bit*  
*Spanner*

### Optional:

*Extension*  
*RCD Safety Plug*  
*Reciprocating Saw (Corded/Cordless)*  
*Jigsaw - for cutting curved rafter tails*  
*Screwdriver Set*  
*Marking Paint*

### Materials:

*4(3" by 3") square posts*  
*4(4" by 1") rafters x (2.4m) lengths*  
*1 (6' x 6') trellis or any dimension you would like!*  
*4(3" x 3") spiked Metposts / post anchor*  
*Metpost driving tool*  
*Screws (4mm x 65mm) for outdoor use*  
*Coach bolts (M8 x 110mm)*  
*Washers (M8)*  
*Clear preservative*

### Optional:

*Wood stain/preservative*  
*Trellis panels for the sides*



You can find most of the items [here](#). Just click on the link and enter the item name in the search box. The underlined links will take you to a page where the timber is sold. You could just take a look, (if you are not sure what something is), and then buy from a DIY store or your local builder's merchant. Whatever is most convenient.

Several options may be listed. Choose any that are within your budget.

If you can afford DeWalt, Makita or Hitachi, go for those - DeWalt being the best, but there are lots of reasonably priced items that will do the job.

Look in their Clearance section, where they have items listed that are not available through their other pages, as you can get some great bargains here, e.g. drill bit sets and tubs of decking screws.

*The suggested materials for this pergola are based on a pergola with roof trellis dimensions of 6' square.*

*Measure out the footprint on the ground and see if it is going to be the correct size. You could, of course, have a roof measuring 5' x 5', 6' x 5', 5' x 4', 5' x 3', 6' x 4', 6' x 3' etc. as these are all standard trellis sizes, and the plans will work with any size.*

*Visit 'Adapting the Plans' for more detailed information on standard lengths for wood, as you may choose to shorten some of the bought lengths, say, if your pergola uses 3' trellis, or you may choose to get two out of one length of wood. Don't forget that the rafter tails will add 18" to the length.*

# Simple Pergola Plans



Fig. 1

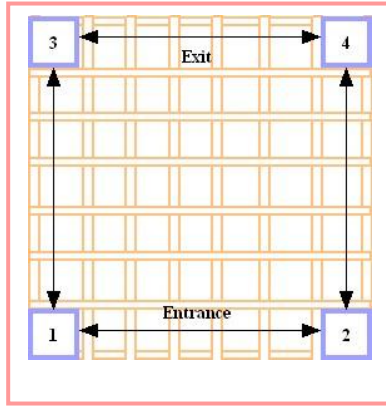


Fig. 2

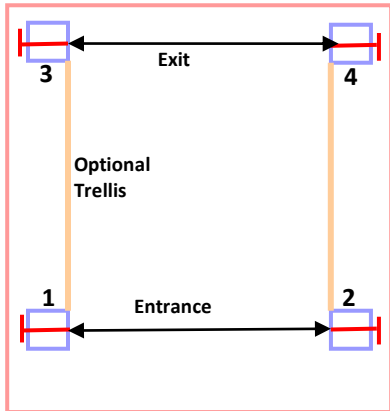
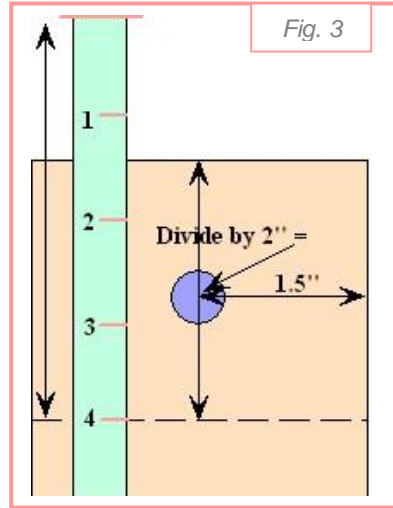


Fig. 4

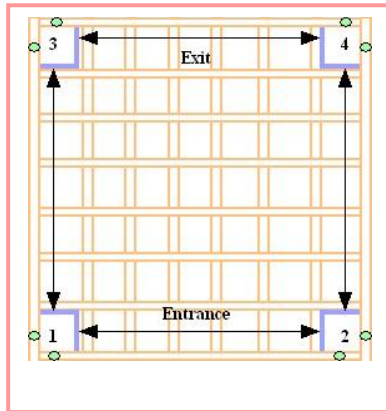


Fig. 5

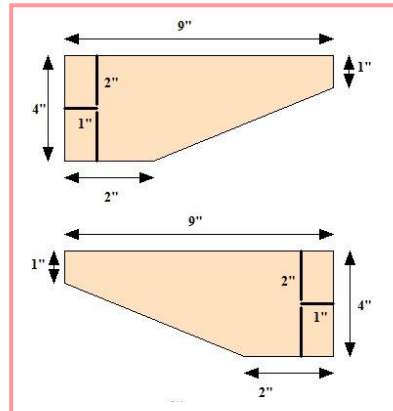


Fig. 6

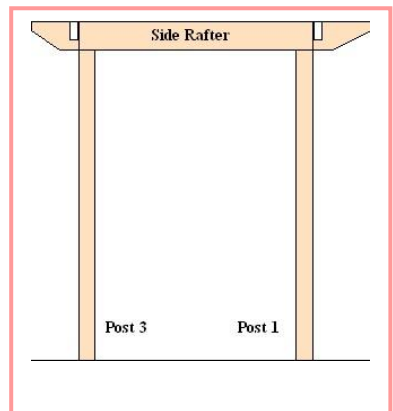
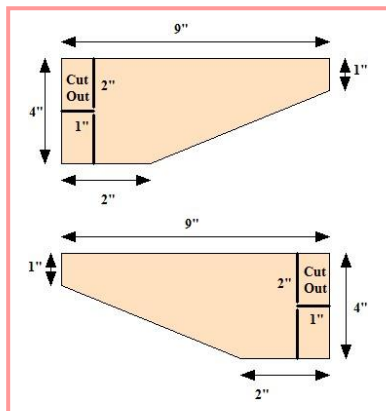
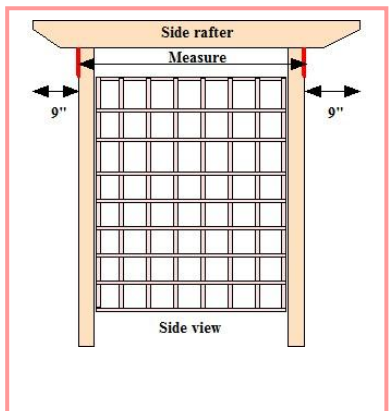


Fig. 7

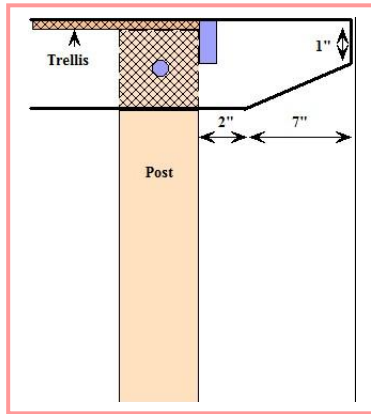


Fig. 10

Fig. 8

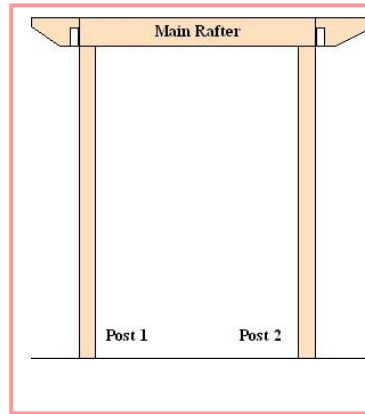


Fig. 11

Fig. 9

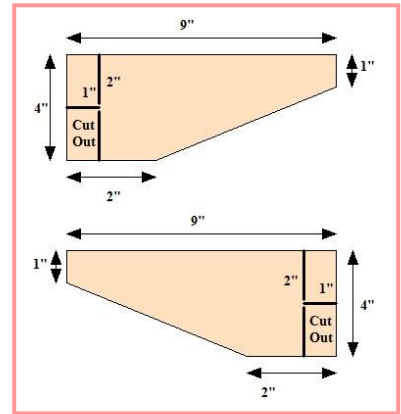


Fig. 12

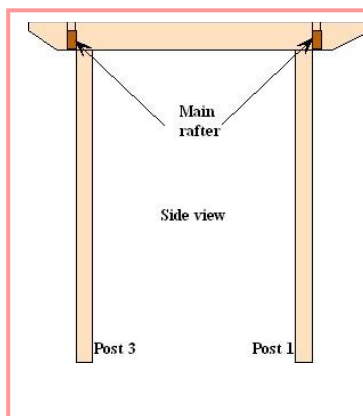


Fig. 13

## Organise Your Project

- Print these plans.
- Make your rafter tail template or choose it from: [www.pergolaplans4free.co.uk/pergola-rafter-tails.html](http://www.pergolaplans4free.co.uk/pergola-rafter-tails.html)
- Print the list of tools and materials. Tick off as you gather them together.
- Check for any adaptations that you may need, or want, to make: [www.pergolaplans4free.co.uk/adaptingtheplans.html](http://www.pergolaplans4free.co.uk/adaptingtheplans.html)
- Place in a ring binder

Ready to begin? Let's get going!

## **The Plans**

### **Position the Posts**

1. Check that there are no underlying services i.e. electricity, water and cable, as these can be very expensive to repair!!
2. Take your trellis panel and lay it on the ground where you want the roof of your pergola to be. If your ground isn't level see [www.pergolaplans4free.co.uk/adaptingtheplans.html](http://www.pergolaplans4free.co.uk/adaptingtheplans.html), or simply level it using a board and your spirit level.
3. Mark around the corners of your trellis. This will show where the posts need to be placed. (fig. 2)
4. The diagram shows the posts, so that you will know where they should be. You only need to mark the outside edges of the corner of the trellis.
5. Now you need to work out where the bolt holes need to be drilled in all your posts. (fig. 3)
  - a. Measure the thickness/depth of your trellis edge (that is the total depth of both the wood running down and across - it will be about 1 ½"). The roof trellis is going to sit in the recess made by the rafters.
  - b. Put your tape measure against the top of your post so that it sticks out over the end by the amount that is the thickness of your trellis panel.
  - c. On the post itself, draw a line across the width of the post where the tape shows 4" (that is the depth of your rafters).
  - d. Now put the tape measure to the exact top of the post. Note down the measurement to your line (e.g. 2 ½") and half it (e.g. 1 ¼")
  - e. Mark a point at this measurement down and 1 ½" from each side.
6. Drill a hole right through the posts, where you marked the bolt hole positions, with a 8mm drill bit.
7. Position Metpost 1 into the ground, where you marked the corner of the trellis and drive it in with the driving tool. (fig. 2)
  - Keep adjusting the Metpost to keep it square, using the handle on the driving tool, as they do tend to skew as you hit them in.
  - Insert only the spike into the ground.
8. Do the same with Metpost 2, making sure it is level horizontally with where you want the entrance to be.

9. Place the 3" x 3" wooden Post 1 into Metpost 1, making sure the bolt holes are placed in the correct direction. (fig. 4)

- You may need to use a mallet if the post is a tight fit.
- Make sure it is perfectly upright using the post level.
- Tap lightly on the side to bring it level.

10. Drive in Metposts 3 and 4.

- The marks you made in step 3. Show exactly where the posts should lie.

You should be good at this by now!

11. Put the other posts into the Metposts and level them up with the post level.

12. Tighten the Metpost bolts.

### ***Attach the Trellis Roof***

13. Sit the trellis panel on top of the posts.

- The posts should sit exactly under the trellis panel corners.
- Make slight adjustments, if necessary.

14. Pilot drill a holes down through the trellis panel into the top end of the posts (fig. 5).

- You will need your step-ladders here.
- Be very careful when using ladders and power tools. Make sure your ladders are secure.

15. Screw down into this hole with you screws (fig. 5).

Well done!

You have attached the trellis roof and are ready to attach the side rafters and main entrance/exit rafters.

## ***Attach the Side Rafters (Those running from posts 1 to 3 and 2 to 4.)***

1. *Firstly, make a template for your rafter tails/ends. Mark on both sides. (fig. 6)*
  - *A shoebox or cornflake packet will do.*
  - *If you would like a ready-made rafter template or would like a wider choice of styles, go to [www.pergolaplans4free.co.uk/pergola-rafter-tails.html](http://www.pergolaplans4free.co.uk/pergola-rafter-tails.html) for these.*
2. *Cut your 4" x 1" wood to the required length.*
  - *To do this, just take the measurement from the outside of posts 1 and 3 and add 18" for the rafter tails - 9" for each side. (fig. 7)*
3. *Place your template onto the end of the side rafter. Mark all around it and then cut the sloping rafter tail. (fig. 8)*
  - *Take care that you have the template the right way up at both ends before you cut!*
  - *Always check your markings before cutting.*
4. *For the side rafters, the notch needs to go at the top edge. Mark it from your template, making sure that the notch width is the same thickness as your rafter – if it is exactly 1" then cut your rafter at 1" – if it is  $\frac{3}{4}$ " cut the notch to  $\frac{3}{4}$ ". (fig. 9)*
  - *Use a carpenter's square or set square to make sure your lines are at 90 degrees.*
5. *Saw the notches to the 2" mark and then chisel out the rest. This gives a flush fitting.*

*So far, so good?*
6. *Hold the side rafter up to the line you made on the side of your post and mark the bolt position, through the post bolt hole, with a pencil or your drill. Drill the side rafter with the 8mm drill bit. (fig. 10)*
  - *The notches should lie immediately outside, and flush with, the outside edge of the post.*
  - *The top of the rafter should lie flush with the top of the trellis edge.*
7. *Do the same with the opposite side rafter.*
8. *You are ready to bolt on the side rafters.*
9. *Line up the bolt holes and use a hammer or mallet to push the bolts through. Add a washer and then the nut. Tighten up. Do this for all four bolts.*
  - *The circular domed end of the bolt should be on the outside of the post.*

*You are nearly there – only the main rafters to put on!*

### ***Attach the Main Rafters (Those running from entrance to exit.)***

1. *It is important to remember that on the main rafters, the notches are on the bottom. (fig. 11)*
  - *Check carefully against the diagram before you cut.*
2. *Cut the wood to length – that is the distance between posts 1 and 2 + 18”*
3. *Use your template to mark and cut the ends.*
  - *Check before you cut that you have marked both ends the right way up!*
4. *Use your template to mark and cut the notches. (fig. 12)*
  - *Check your rafter thickness so that when you cut the notches, they are the same width as the rafters.*
5. *Now place the main rafter notches onto the side rafter notches and use your mallet to gently knock them together so that they lie flush (fig. 13).*
  - *If you hit them too hard the wood will split!*
6. *Use your pilot drill to drill through the main rafter down into the side rafter.*
7. *Screw in from the top.*

### ***Attach Trellis to the Sides (Optional)***

*You can of course attach trellis to the sides of your pergola; and even to the back of your pergola, if you want to make it into a shady retreat. This is quite simple to do. However, the trellis is unlikely to fit exactly, as your exact trellis measurement was used to form the layout measurements for your pergola roof.*

1. *Measure the width of the space between the inside of your posts 1 and 3.*
2. *Mark this measurement on you trellis width all the way down your trellis panel.*
3. *Cut the trellis panel to size.*
4. *Position the trellis panel about equal distance from the ground and the bottom of your rafter.*
5. *Hold the trellis flush with the inside edge of the side posts 1 & 3 and pilot drill the first hole, through the uncut trellis edge into the post, near to the top of the trellis panel. Screw in.*

- *You can place some brick, stone, or anything really, underneath the trellis to support it, while you are drilling and screwing. Better still, get someone to help.*
6. *Now attach the other side. Use your spirit level to make sure your panel is level, at the top.*  
  
*Take a corner bracket, pilot drill, and screw it into the post and the cut trellis edge, from the back, to join the two together.*
    - *The trellis will be held in place now.*
  7. *Drill three more pilot holes down one side and then screw to join the trellis to the post, making sure that the trellis edge is to the inside edge of the side posts, all the way down.*
  8. *Repeat for the other trellis panel on the opposite side between side posts 2 & 4.*

*Wow – looking good!*

*Last but not least, take a long cool beer, a glass of wine or a good old cup of tea, stand back and admire your work.*

## ***All Finished!***

*Last but not least, take a long cool beer, a glass of wine or a good old cup of tea, stand back and admire your newly built creation.*

*When you come to add some stunning climbing plants, take a look at [www.pergolaplans4free.co.uk/climbingplants.html](http://www.pergolaplans4free.co.uk/climbingplants.html), for ideas and advice.*

*For adding furniture to your seating area, you may find ideas at [www.pergolaplans4free.co.uk/gardenfurniture.html](http://www.pergolaplans4free.co.uk/gardenfurniture.html).*

*I would love to hear from anyone who has built this pergola. If you would like to give your comments, please visit [www.pergolaplans4free.co.uk/feedback](http://www.pergolaplans4free.co.uk/feedback).*

*Or have your pergola story on a page on the website. It's very easy to do, and we'd all love to see your creation! You can add it [here](#) .*