

## Fixing the rafters to the beams

Use framing anchors to fix the rafters to beams (fig 8). Fix the anchors at 900 mm centres along the beams. Fix rafters to the brackets using galvanised bolts and nails.

## Adding Battens

Battens can be fixed across the rafters to hold shade cloth or support climbing plants (fig 9). Vary the spacing of the battens to create interesting shade patterns before deciding on final placement.

Decorative elements can be added to your pergola using treated pine lattice (fig 10) or by cutting your own decorative timber corner brackets (fig 11).

Fig8 Fix rafters to beams with framing anchors

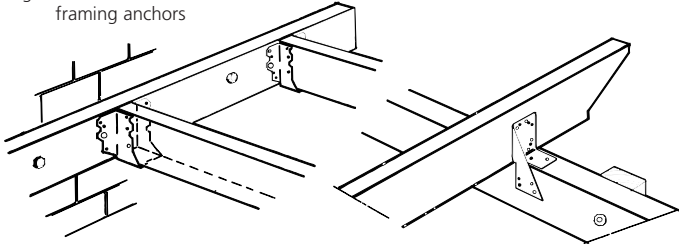


Fig9 Nail battens across the rafters.

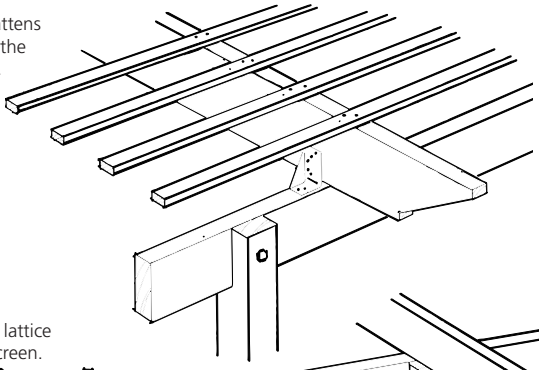


Fig10 Pine lattice as screen.

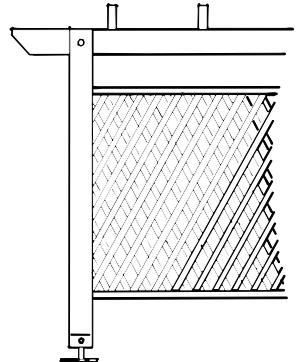
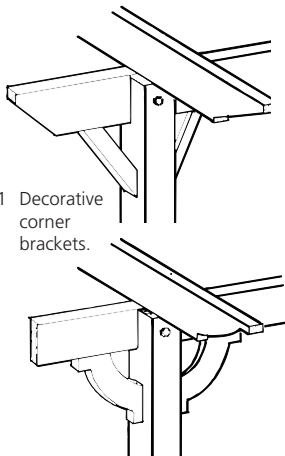


Fig11 Decorative corner brackets.



## Project Cost Estimator

Materials Description	Quantity	Cost
Posts 100mm x 100mm		
Post Stirrup		
Wall Plate 200mm x 50mm		
Beam(s) 220mm x 70mm		
Rafters 140mm x 45mm		
Battens (optional) 45mm x 20mm		
Concrete Mix		
Galvanised Bolts		
Galvanised Nails		
Framing Anchors		
Joist Hangers		
Timber Finish		
<b>Equipment</b>		
Square		
Spirit Level or Post Level		
Spade or Post Hole Digger		
Hammer		
Measuring Tape		
Drill		
Circular Saw or Hand Saw		
Shifting Spanner		
String Line		
Paint Brush		
<b>Total</b>		

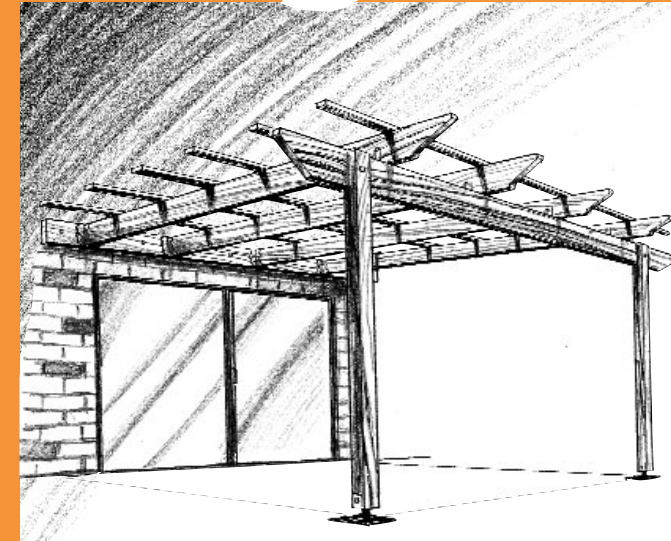
All these materials you need for this job are available at Magnet Mart, your home improvement warehouse.

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# Build a Pergola



- Easy to follow step-by-step guide
- Important and handy tips
- Materials check list
- Project Cost Estimator

Before you start, please read through this pamphlet carefully and estimate and assemble all the materials you will need for the project and gather your tools and equipment together. Refer to the checklist and estimating form on the back panel of the pamphlet to assist in this preparation.

## You Can Build a Pergola

### Types of Pergola

There are two basic types of pergola – free standing and house fixed. Both types have similar construction methods. Check with your local building authorities to ensure that your pergola will comply with any relevant building regulations before you commence.

### Preparing the Site

Check your site plan to ensure that there are no water, gas, sewerage or drainage lines under your proposed pergola site –

A house fixed pergola.

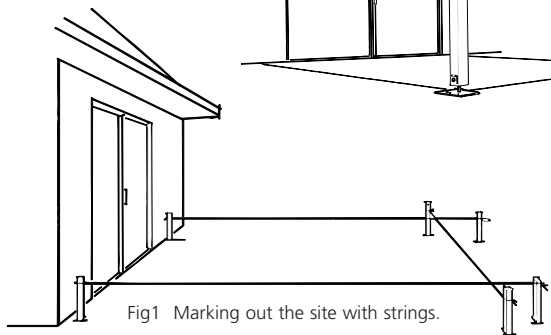
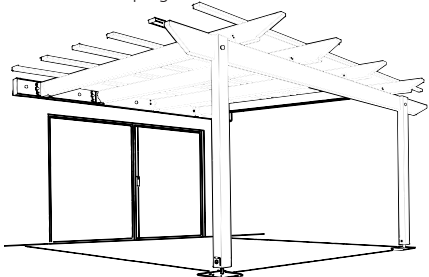


Fig1 Marking out the site with strings.

you may need to mark their position before you dig footings. Lay out your pergola using string lines (fig 1). Check for square by measuring the diagonals (fig 2). If house fixed, lay out the posts along the side facing the wall (fig 2). If free standing, lay out the posts on two sides (fig 3). As the pergola is a light structure, the posts may be set up to 3 metres apart.

Fig2 Check square by measuring diagonals.

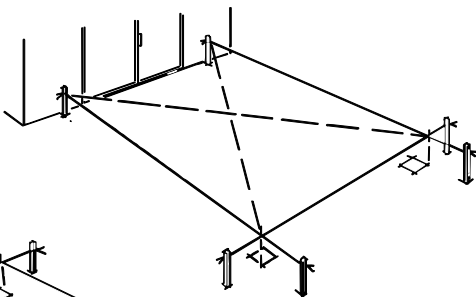


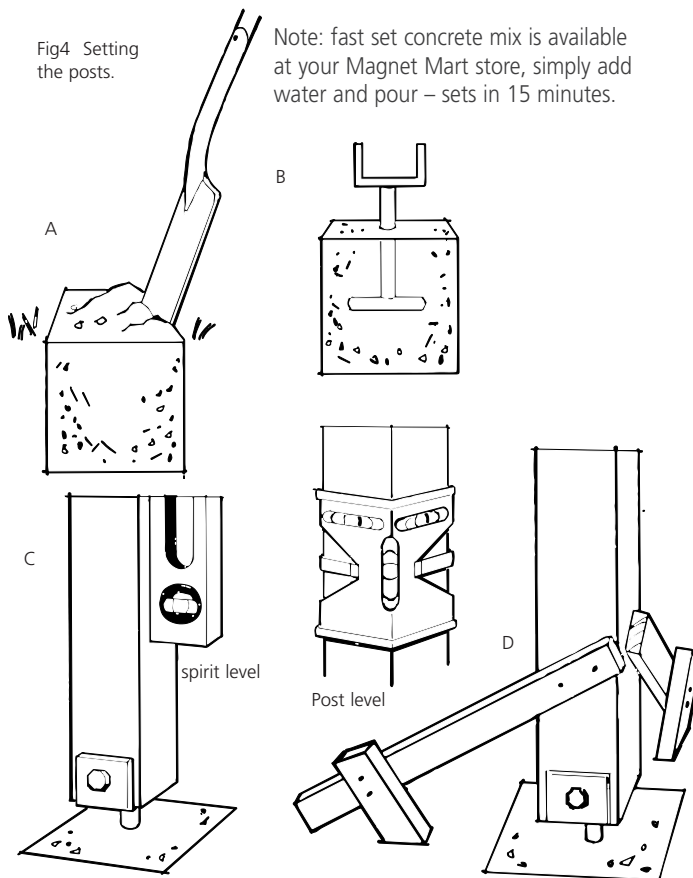
Fig3 For free standing pergolas, lay out the posts on two sides.

### Setting the Posts

- Dig post holes to allow at least a 300mm x 300mm x 450mm concrete pad to be poured for the post stirrup bracket (fig 4). For free standing pergolas, dig the holes a little larger to accommodate a larger concrete pad for added stability. Mix concrete according to the manufacturer's instructions, allowing a generous amount for each post hole.
- Pour concrete into hole and set a stirrup bracket in the centre of the pad allowing around 75mm clearance between the ground and the bottom of the post.
- Check the post is vertical using a spirit level or a post level.
- Temporarily brace the post and allow to set for 48 hours.

At this point, you may wish to paint all the posts, beams and rafters prior to final fitting, alternatively, you can leave painting until the pergola is completed. A wide range of timber finishes is available at Magnet Mart to protect your pergola, come on in and talk to one of our helpful Associates about your needs.

Fig4 Setting the posts.



Note: fast set concrete mix is available at your Magnet Mart store, simply add water and pour – sets in 15 minutes.

### Fixing the Rafters

- With the aid of a string line, trim the posts to the desired height (fig 5).
- Cut a rebate in the top of each post to seat the beam.
- Measure and cut the beam to length, drill for bolt fixing to the post rebates.

Fig5 Fixing the rafters.

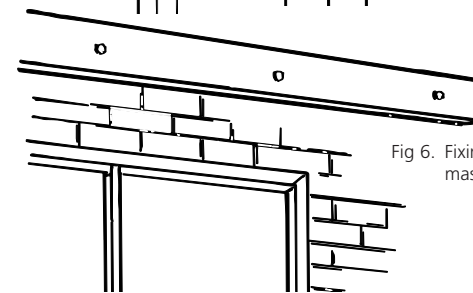
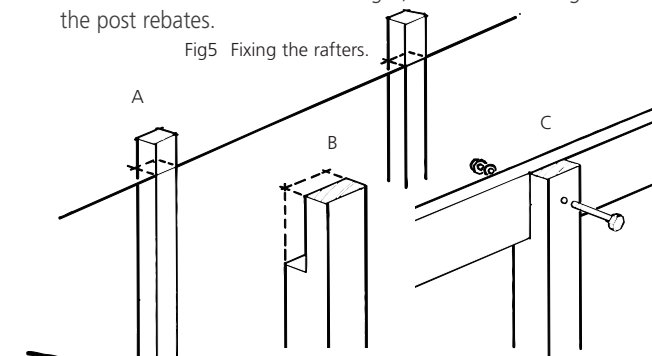


Fig 6. Fixing wall plate to a masonry wall.

For a house fixed pergola, fix a 200mm x 50mm beam or wall plate to the house at the appropriate height. Use dynabolts to fix the wall plate to a masonry wall and coach screws for a timber wall (fig 6). Measure and cut the rafters to length, allowing sufficient length for the end decoration (fig 7).

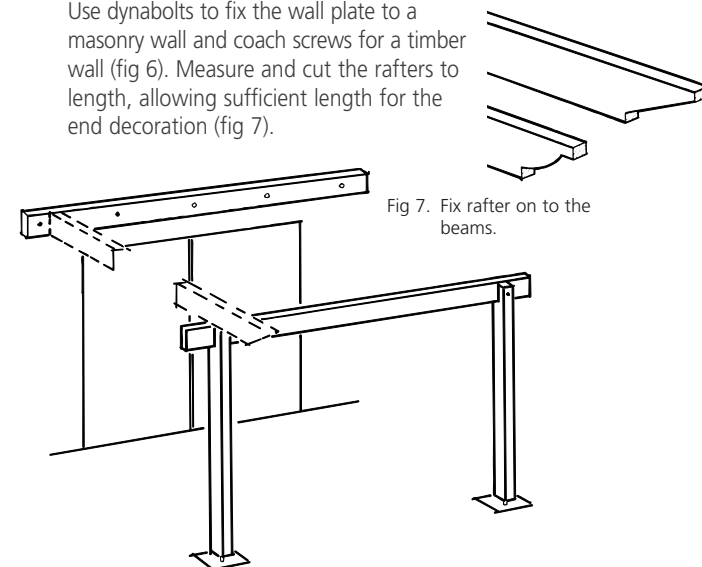


Fig 7. Fix rafter on to the beams.