

Construction Recommendations (for walls under 1m high)

- Walls closer than 1.5m to a building, over 1 metre high or on a steep slope, may require building approval and certification by an engineer.
- Designs shown are based on construction in firm natural ground, either stiff clay, shale or dense sand with a maximum ground slope of 1:6.
- Timber must be treated to hazard level H4 or better.
- Walls exceeding 400mm high should have a 1:10 batter as the batter allows the wall to have some lateral movement yet still be stable.
- Post holes must have a 100mm layer of coarse gravel for drainage.
- Sleepers must be placed behind posts.
- Tops of posts should be cut with a slight slope to shed water. They should also be sealed with a preservative emulsion.
- Lay an ag pipe at the base of the wall and extend it to a free draining outlet (but not a storm water drain).
- To prevent back fill material from flowing through the gaps in the wall and to assist with drainage, place geotextile on the inside face of the wall. Do not use plastic sheeting as this could cause water build up and possible wall collapse.



Wall height (mm)	Posts	Hole size diameter x depth	Ironwood® sleepers	Post spacing
600	150 x 75 Ironwood Sleepers	300mm x 600mm	150 x 50 x 2400	1.2m
		330mm x 600mm	150 x 50 x 3000	1.5m
800	200 x 75 Ironwood Sleepers	450mm x 600mm	200 x 50 x 2400	1.2m
		450mm x 650mm	200 x 50 x 3000	1.5m
1000	125mm Ironwood Slab	300mm x 750mm	200 x 50 x 2400	1.2m
			200 x 75 x 3000	1.5m

distributed by

Copies of the Ironwood warranty brochure and conditions of the warranty, Material Safety Data Sheets and further technical information on Ironwood Outdoor Treated Pine are available online at

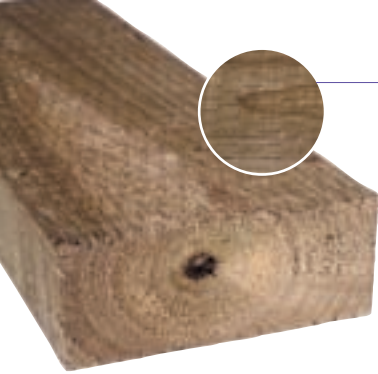
chhwoodproducts.com.au

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DO-IT-YOURSELF IRONwood® GARDEN WALLS



A do-it-yourself guide from Carter Holt Harvey Woodproducts Australia



Technically advanced cutting pattern for improved penetration. Treatment penetrates to H4 protection level for in-ground contact.

Ironwood® landscaping sleepers and logs offer you the natural beauty and warmth of real timber coupled with its strength and durability. For extra piece of mind, Ironwood® sleepers and logs come with a written 40 year guarantee against attack by termites and fungal decay so you can build with complete confidence (see guarantee form for details). Ironwood is simple to work with and provides you with a great range of do-it-yourself landscaping opportunities. See the Ironwood warranty certificate and product tips brochure for further details.

This guide shows you how to build a small garden wall up to 600mm high without the need for complex engineering design or expensive machinery. For larger jobs we suggest you contact a landscape design engineer as these may require certification by your local council.

Where to start

This garden wall design can be used with rectangular sleepers, round logs or slabs (these are logs with two parallel faces machined flat). Posts should be spaced at 1.2m intervals if you choose to use 2.4m sleepers, or 1.5m if you use 3.0m sleepers. Half logs and winged splits are also available and provide an economical alternative in low load applications such as garden beds.



Step 1. Lay out your wall

Using a string line, lay out where your wall is to be positioned and mark your post spacing according to your sleeper or log length.

Step 2. Post installation

Dig your post holes 700mm deep x 300mm wide. A post hole borer can be hired to make this job easier or if access is no problem you can have your holes dug by a Bobcat. Fill the bottom 100mm of each hole with coarse gravel for drainage. Cut your posts to length (1200mm for a 600mm high wall) and place in the post holes. Seal all cut ends with a sealant. Fill holes with concrete to ground level. Posts should be leaning back about 5 degrees towards the bank to allow for deflection under load. Start at each end of your wall and use a string line to align the posts.



Step 3. Horizontal timber installation

Place the first horizontal timber behind the base of the posts. The most important step is ensuring this timber is level. Dig out a channel to sit the timber in as needed. Pre-drill a slightly undersized hole in the horizontal timber and drive a galvanised spike or nail into the upright post. Now simply stack additional logs or sleepers on top to reach the desired height securing with spikes/nails as you go.

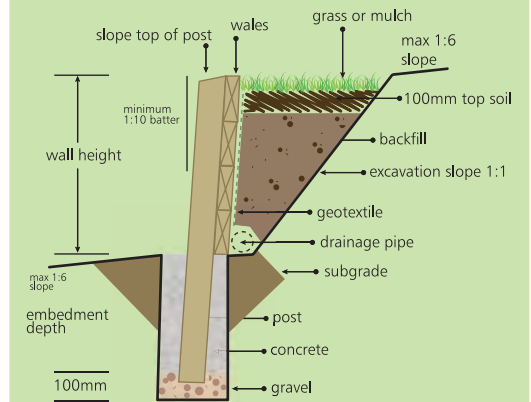


Step 4. Drainage and fill

Lay slotted agricultural pipe behind the wall extending at the lowest point for drainage. Place course gravel around the pipe. It may also be desirable to line the inside of the wall with porous geotextile to prevent soil from washing through the wall. Do not use plastic sheeting as this can cause water to gather behind the wall which creates the potential for collapse. Back fill behind the wall creating a spoon drain on top to help with run off to complete your garden wall.



Typical garden wall construction



End Section (mm)	2.4m lengths	3m lengths
150 x 50	✓	✓
200 x 50	✓	✓
150 x 75	✓	✓
200 x 75	✓	✓
150 x 100	✓	✓
200 x 100	✓	✓

The economical design alternative

In many garden wall designs significant cost and labour savings can be achieved by using 3m long sleepers instead of 2.4m long. Use of 3m sleepers in the above examples can result in savings of more than 10% based on the reduced number of post holes required.

