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CENTENARY LANDSCAPING SUPPLIES Do it Yourself Landscape Guide

How to Build a Sleeper Retaining Wall

Building retaining walls using treated hardwood sleepers provides a natural and attractive way of developing and landscaping your property. They are excellent where strength, low cost easy construction and low maintenance are required.

Before you start your Sleeper Retaining Wall make sure you consider the following ...

- * When selecting the site, check with your Local Council for information on retaining wall specifications, because wall heights do vary from council to council.
- * If on a boundary, talk to your neighbour about what you are doing.
- * If you have large wall get a professional to do it for you.
- * Check the specification sheets for further help on structure.
- * The information in this sheet is basic but helpful. There are always those experts who will advise you differently. Please use your own judgement and remember any help you can get may be worth considering.



Detailed below are the recommended steps to follow in constructing your own 1m high X 12m long retaining wall. The construction should be conducted over two phases. First to layout and concrete posts in place and let go hard. Then follow with construction of wall.

Step 1: Selecting the Materials

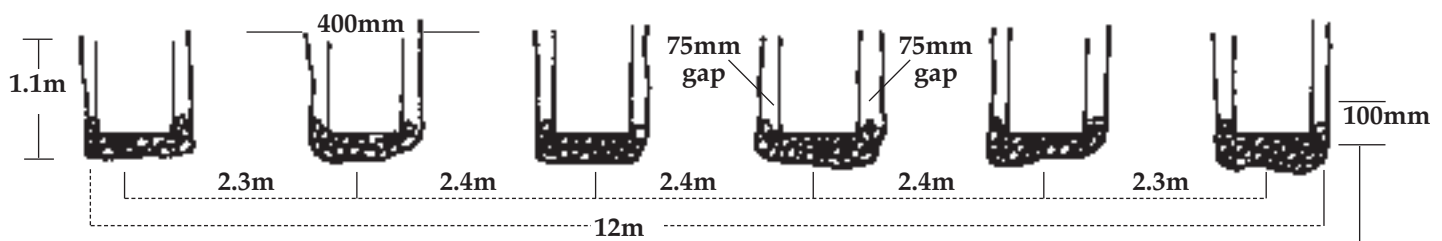
- (a) Posts ... 6 x 2.1m x 200mm x 100mm treated sleepers
Rails ... 25 x 2.4m x 200mm x 75mm treated sleepers
- (b) 20 x 200mm x 10mm Cup Head Bolts and a quantity of 100mm nails. All the nuts, bolts, washers and nails must be hot dipped galvanised, to prevent deterioration from the timber treatment.
- (c) Geo-Fabric 6 x 1.6m lengths
This is used to filter the water seepage prior to drainage.
- (d) Ag Pipe (Agriculture Coil Pipe) Long enough to drain water from behind the wall and into the gutter or discharge point.
- (e) 1 cubic metre of Drainage Gravel, 10mm, 20mm or 40mm to use for the drain behind the wall and also for the post holes.
- (f) 12 bags of Cement and 1 cubic metre of concrete blend (the correct mixture of gravel and sand, 5:1)
- (g) 12 x 2m timber braces for supporting the posts during concreting

Step 2: Preparing the Post Holes

Using a stake at both ends of the wall, lay a string line along where the front edge of the posts will be. If the retaining wall is to be built on your boundary, ensure there is no encroachment on neighbouring land.

Mark the centre of each hole. All posts should be 2.4m apart from centre to centre, except for the two end posts which should be 2.3m apart from centres. Each hole should be 1.1m deep and 400mm x 400mm in width.

Dig all the holes ensuring to check alignment after each one. When they're all dug, place 100mm of 20mm Drainage Gravel in each hole and stamp down. This will allow drainage of any water, and allow you to adjust the height of the posts. The width of the hole should leave a 75mm gap between the post and the edge of the hole.



Step 3: Positioning the Posts

Place in one of the end posts and set it at the required angle (batter) by standing a spirit level upright on the side of the hole and in line with the bottom of the post. When the levels are plumb measure back 10mm and move the top of the post to this position. It is now at the correct angle (a one in ten slope approx)

When the post is at the correct batter, hold and brace the post securely in position with the timber braces and stakes.

Do the same with the other end post and when you've finished place a string line along the bottom of both posts and across the top. This will give the correct line positions for the other four posts. Position and secure the other four posts.

Step 4: Concreting in the posts

When all the posts are in line, correctly placed and securely braced, remove the string line and concrete the post in. Fill the holes up to ground level with a slope going from the post, down to the edge of the hole for drainage ...

... NOW LEAVE UNTIL NEXT WEEKEND for the concrete to go hard!

Step 5: Securing the Rails

THE FOLLOWING WEEKEND ... Remove all the timber braces and stakes.

Starting at one end, measure the distance from the edge of the end post to the centre of the second post. This should be 2.4m Transfer this measurement to the first rail and cut to size. When you've put the rail into position, hold it securely with nails.

Continue along the bottom of the wall until all the bottom rails are in position, then drill and bolt to the posts. Use two bolts at each end of the rails. The bottom rails are the only ones bolted to the posts. All the others are secured by skew nailing. This allows for the wood shrinkage as it seasons

- On sloping ground, the bottom rails must be kept at right angles to the posts. Cut out the voids. You'll get a stepping effect for each panel.

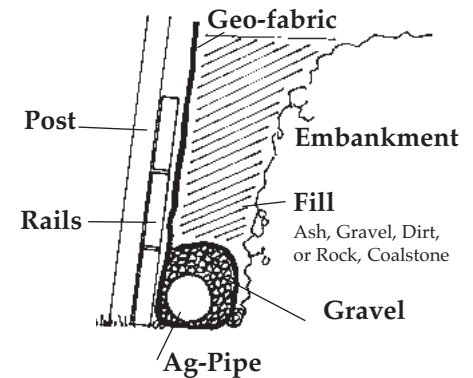
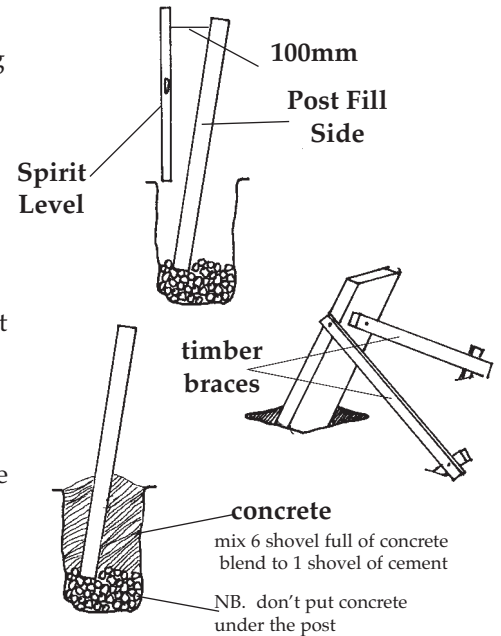
Step 6: Drainage

Drainage is one of the essential components for any type of retaining wall. Without it, the retaining wall may fall over with the volume of water behind it. You are really building a mini dam, so always drain behind the walls.

Position the geo-fabric down the inside of the wall leaving enough to cover the two top rails Lay out approx 600mm from the bottom of the wall.

Position the drain coil on the geo-fabric approx 75mm from the wall ensuring that it is slightly angled to allow for drainage. The coil should drain away to the gutter or some point (not next door!)

- Geofabric does not rot and acts as a filter to keep the fine particles of soil out of the coil and prevent them from seeping through the wall.
- Do not connect the coil up to the storm water drain, because excess flow from the house will cause a back up of water in wet weather and will damage the wall.
- Do not use plastic sheeting to line the inside of the wall, because this then creates a dam effect.
- Shovel in the gravel until about 200mm covers the coil.
- Pull over the bottom part of the geo-fabric, secure to the wall and cover with fill.



Handy Hints

* As soon as the timber arrives it should be stacked at least 150mm off the ground. Make sure the stack is level and pieces remain straight.

* While the CCA treatment protects the sleepers from termite

and fungal attacks it does not protect it from the effects of weather. To keep your sleepers looking good for the maximum period of time you'll need to give it a coat of Raincoat (available in a variety of fashionable colours or clear) CN Timber Oil, XJ Timber Protective or Cleansote Timber Preservative.

To order your Timber and Drainage Supplies or for questions answered, please give us a call on 3373 4900 We're here to SERVE YOU and DELIVER to you 7 days a week



We're open 7 days a week
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